



# Chemotherapy administered in the Home Setting

Market research with selected stakeholders

Vawser and Associates

November 2018

SUMMARY REPORT

**Baxter**

 **VAWSER & ASSOCIATES**  
Consultants in Market Research

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This report presents the findings of exploratory qualitative research with a selection of stakeholders involved with chemotherapy administered in the home setting. The research involved 10 exploratory qualitative telephone depth interviews with respondents located across five mainland states. The fieldwork was conducted in August of 2018.

### AIM OF THE RESEARCH

The overall aim of the research was to explore and identify the main drivers of a trend towards increasing delivery of chemotherapy to cancer patients in the home setting. Specific research objectives are listed in the main body of the report.

### KEY FINDINGS

#### **Models of in-home chemotherapy services:**

Respondents came from three distinct organisation types delivering chemotherapy in the home setting:

- ▶ Model 1: Public hospital HITH services providing in-home chemotherapy.
- ▶ Model 2: Private hospital HITH services providing in-home chemotherapy.
- ▶ Model 3: Private independent HITH / infusion services providing in-home chemotherapy.

Each model had slightly different drivers of uptake and use including different funding models and different sources of patients. Some organisations were established and had been in operation for some time, while other organisations were in the process of setting up or were newly established.

#### **The nature of chemotherapy being administered in the home setting:**

Most chemotherapy being administered in the home involved funded intravenous treatment, that could be administered in a short period of time, to stable patients, within a defined geographical boundary. Most treatment was sourced from hospital pharmacies and was transported and administered by highly experienced nurses.

Two private independent services also sourced treatment from independent manufacturing pharmacies who delivered to a central store or the patient home.

#### **The reasons chemotherapy is being administered in the home setting:**

The main reasons chemotherapy is being delivered in the home setting were said to include:

- ▶ Patient choice, patient preference, patient demand - Most mentioned.
- ▶ To overcome hospital capacity constraints
- ▶ Private health insurance funds (PHI) are willing to fund and generate consumer awareness.
- ▶ A proportion of clinicians are willing to refer patients for home administration.
- ▶ Other reasons listed in the body of the report.

The specific motivations and reasons chemotherapy is being delivered in the home setting varied by organisation and are further discussed in the body of the report.

**Funding of in-home services:** Funding of in-home treatment services varied by model type and individual organisation:

- ▶ Public hospital HITH services - Same funding mechanism as general HITH services
- ▶ Private hospital HITH services - Private health insurance funds
- ▶ Private independent HITH / Infusion services - Mainly private health insurance funds but also from government contracts, hospital contracts, pharma companies, and self-funding patients.

**Funding of chemotherapy medications:** The vast majority of medications administered in the home were funded via the PBS (same mechanism as hospital / day oncology). Oral and subcutaneous injections are not funded and were generally not administered in-home by most services unless by special arrangement.

### **Drivers of uptake of chemotherapy**

**administered in the home setting:** The main drivers of uptake were said to be:

- ▶ Patient choice / demand, positive patient experience.
- ▶ Private health insurance funds (PHI) - Funding the private sector, generating consumer awareness and demand.
- ▶ Helping overcome hospital infusion capacity problems - Facilitates growth without capital expenditure on new facilities.
- ▶ Support from specialists - In-homes services are dependant on specialist referral.
- ▶ Public HITH services being cheaper / cost effective compared to in-hospital services.

### **Barriers to uptake of chemotherapy**

**administered in the home setting:** The main barriers to uptake were said to be:

- ▶ Lack of support from specialists - Lack of patient referrals.
- ▶ Economics and funding limitations - Limited by PHI / public funding, the need for service efficiencies, and the need to be economically viable and sustainable.
- ▶ Lack of skilled staff - Said to be hard to find and recruit.
- ▶ Underutilisation of hospital facilities - Priority to fill hospital capacity before use of in-home services.
- ▶ In-home service limitations - Not long or high risk infusions, are geographic, risk and resource limitations.
- ▶ Hospital administration resistance - Don't support the concept - Both private and public hospitals.

### **Critical success factors for chemotherapy**

**administered in the home setting:** Critical success factors for services administering chemotherapy in the home setting were said to include:

- ▶ Having an adequate funding model - Both private and public sector.
- ▶ If in-home services can generate savings - For PHI Funds, for public hospitals, for government.
- ▶ If can illustrate positive outcomes - Low readmission rates, high quality care, high patient satisfaction, few problems.
- ▶ Driving public awareness - Consumer awareness creates demand. If PHI Funds continue to generate awareness.
- ▶ Specialist education / gaining specialist support - Essential to drive patients referrals.
- ▶ Ability to get appropriate skilled staff - Basic requirement for in-home services.
- ▶ Integration with hospital cancer services - Fitting in with / complimenting day oncology and other hospital cancer services.
- ▶ National haematology / oncology consensus guidelines on chemotherapy administered in the home setting.

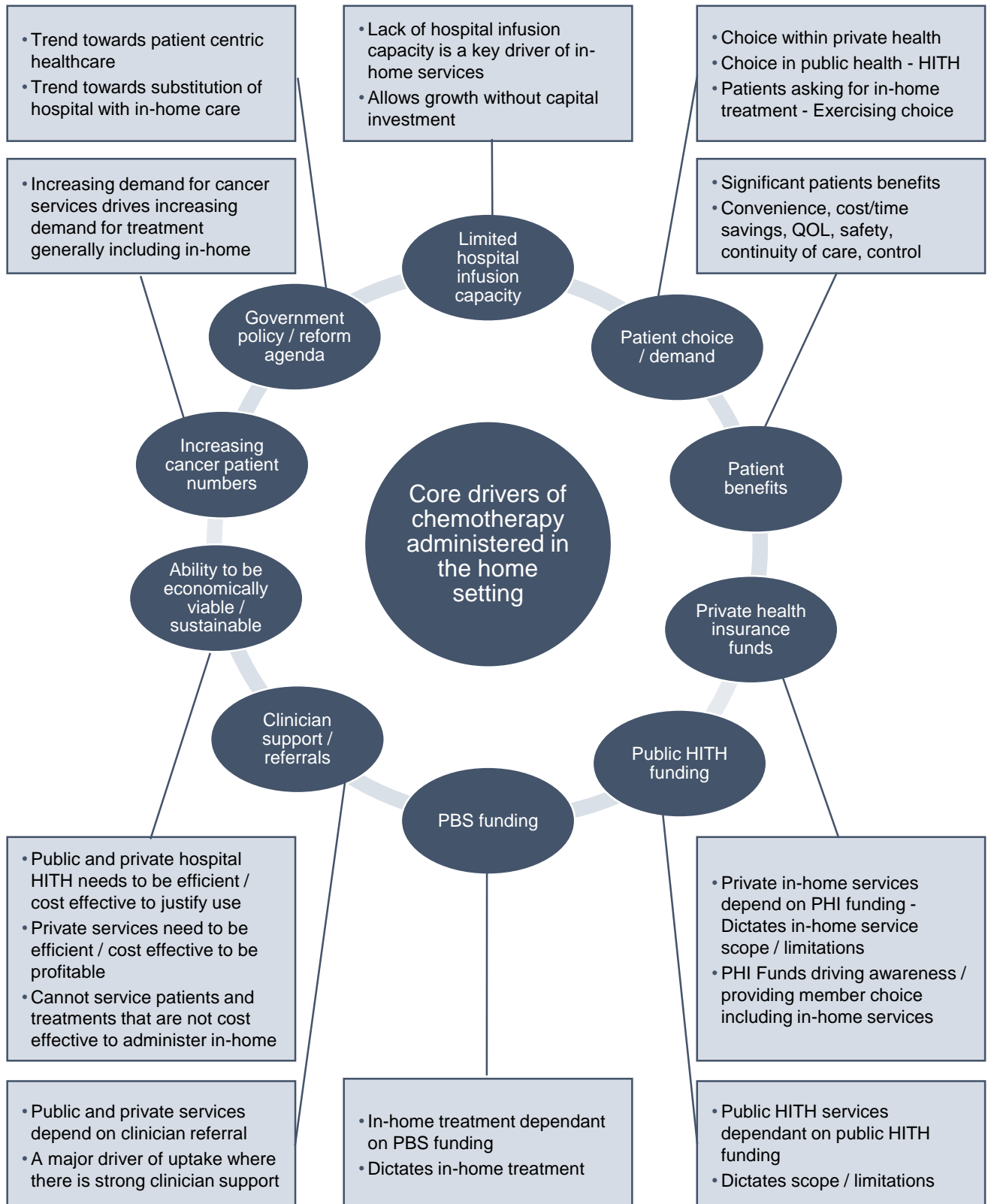
### **Summary conclusions**

We concluded the future for in-home cancer treatment appears to be positive, albeit early days in the development of this new cancer treatment delivery approach. We also concluded there are a number of unknowns that could impact on the longer term potential of this emerging sector.

The challenge for all stakeholders is to develop and implement best practice service delivery models backed by appropriate funding mechanisms to meet the needs of appropriate private and public cancer patients across Australia.

More detailed conclusions are shown in the main body of the report.

# CORE DRIVERS OF CHEMOTHERAPY IN THE HOME SETTING



# INTRODUCTION AND BACKGROUND

## BACKGROUND

Baxter International Inc. is a global, diversified healthcare company supplying medical devices, pharmaceuticals and biotechnology. It employs approximately 50,800 employees around the world.

## BAXTER IN AUSTRALIA AND NEW ZEALAND

Baxter Healthcare has had a local presence in Australia and New Zealand (ANZ) region for over 50 years.

In Australia, it has a manufacturing plant in Western Sydney; distribution and warehousing depots in NSW, QLD, VIC, SA, WA and TAS; and aseptic compounding facilities in NSW, QLD, VIC, WA and SA.

In New Zealand it has warehouse, distribution centres and aseptic compounding pharmacies in both Auckland and Christchurch. All of Baxter's facilities are TGA/Medsafe approved and audited.

## BAXTER COMPOUNDING

Baxter Compounding provides TGA/Medsafe regulated aseptic compounding services for patients in public and private hospital pharmacies and clinics throughout Australia and New Zealand. Products include, antibiotics, analgesics, intravenous additives, parenteral nutrition and a range of patient specific chemotherapy solutions.

## CHEMOTHERAPY

Historically, chemotherapy for cancer patients was delivered in hospital. In the last 20 years, there has been a major shift in chemotherapy delivery practice from inpatient stay to day infusion clinics, which is now the norm in most Australian hospitals.

## CHEMOTHERAPY IN THE HOME SETTING

In recent years, there has been a significant increase in the delivery of hospital inpatient and outpatient therapies in the home setting, including administration of oral, subcutaneous and intravenous chemotherapy.

Preliminary investigation by Baxter Healthcare showed chemotherapy administered in the home setting is occurring in a number of states in both the private and public settings.

## THE NEED FOR MARKET RESEARCH

Baxter Healthcare already provides a range of individualised, home administered compounded therapy services in Australia and New Zealand.

To better understand this new cancer treatment delivery pathway, Baxter decided to commission exploratory qualitative market research with a selection of relevant stakeholders to:

- ▶ Explore the nature of chemotherapy being delivered in the home setting
- ▶ Explore what is driving the trend towards chemotherapy being delivered in the home setting.

## VAWSER AND ASSOCIATES

Baxter Healthcare commissioned Vawser and Associates to undertake the research in mid 2018. Vawser and Associates is an independent consultancy in market and social research with particular expertise in healthcare. The organisation has conducted market research on a wide range of cancer treatments and cancer types and had a good understanding of the area.

The exploratory qualitative fieldwork was conducted in mid 2018. The final report was presented in September 2018.



# RESEARCH OBJECTIVES AND APPROACH

## AIM OF THE RESEARCH

The overall aim of the research was to explore and identify the main drivers of a trend towards increasing delivery of chemotherapy to cancer patients in the home setting.

## SPECIFIC RESEARCH OBJECTIVES

Specific research objectives included:

- ▶ Exploring the nature of chemotherapy being delivered in the home setting including typical patients, typical treatments, and typical treatment delivery approaches.
- ▶ Exploring the main drivers of chemotherapy being delivered in the home setting including the reasons chemotherapy is being delivered in the home setting.
- ▶ Exploring how chemotherapy in the home is funded including what is and is not funded and the main mechanisms of funding.
- ▶ Exploring the perceived future potential for chemotherapy delivered in the home setting.

Based on the outcomes of the research, the consultants were asked to draw preliminary conclusions about the core drivers of chemotherapy delivered in the home setting, and the apparent potential for chemotherapy delivered in the home setting.

## METHODOLOGY

**Exploratory qualitative research:** Ten, sixty minute telephone depth interviews were conducted with relevant stakeholders across the mainland states in Australia. The sample was purposely designed to be small and exploratory as a first attempt to investigate the issues associated with delivering chemotherapy in the home setting.

## SAMPLING APPROACH

A list of potential stakeholders associated with delivery of chemotherapy in the home setting was developed by Baxter Healthcare for the purposes of recruitment. A specialist ISO accredited recruitment agency was then used to set up the interviews for Vawser and Associates. Respondents were selected on a first to agree basis.

## MODELS OF SERVICE DELIVERY

There were three service delivery models described in this research :

- ▶ **Model 1:** Public hospital HITH services providing in-home chemotherapy
- ▶ **Model 2:** Private hospital HITH services providing in-home chemotherapy
- ▶ **Model 3:** Private independent HITH / infusion services providing in-home chemotherapy.

Three or more respondents from each model type participated in the research.

- ▶ 6 organisations were already providing in-home chemotherapy services.
- ▶ 2 organisations were in the process of setting up in-home chemotherapy services.
- ▶ 1 organisation was discussing / considering in-home chemotherapy service but not made the decision to go ahead.
- ▶ 1 organisation was not involved in providing in-home chemotherapy services (but had relevant experience).

The fieldwork was conducted in August 2018. Baxter was not told who participated in the research and respondents were assured their comments would not be associated with their personal or organisation names.

# THE NATURE OF CHEMOTHERAPY BEING DELIVERED IN-HOME

## SUITABLE PATIENT TYPES

Suitable patients for chemotherapy administered in the home setting generally met the following criteria:

- ▶ Stable patients not requiring acute care in hospital.
- ▶ All ages and demographics.
- ▶ Successfully started therapy in hospital day centre before moving home.
- ▶ Been approved by treating oncologist / haematologist.
- ▶ Agree to have treatment in the home setting.
- ▶ Fit with various service / eligibility requirements - Eligible for HITH entrance, eligible for funding, eligible treatment types, eligible infusion lengths, eligible geographic locations, pass a risk assessment.

## SUITABLE TREATMENT TYPES

Suitable treatment types for administration in the home setting were said to include:

- ▶ Only treatments eligible for funding.
- ▶ Cytotoxics, mAbs, biologicals.
- ▶ Mainly IV infusions - The mainstay of most services.
- ▶ Agreed molecules / treatments - Some services only administered agreed treatments.
- ▶ Treatments that fit infusion length requirements - Driven by a need to maximise the number of visits per day and to be cost effective (generally less than 2 or 3 hours).

Unsuitable treatments for in-home administration did not fit with above requirements - Were not funded (oral, subcutaneous), infusion length too long, at risk of adverse reactions, were not agreed treatment types.

## THE HOME ENVIRONMENT

A number of factors were said to be considered when assessing the suitability of the home environment for chemotherapy administered in the home setting:

- ▶ Must fit geographic boundaries - Generally defined in terms of travel time (i.e. 45 minutes) or distance (i.e. 20 kilometres).
- ▶ Must pass a risk assessment:
  - Assess OH&S risk for nurses - Need to establish the home is safe
  - The same criteria as other HITH patients
  - Need appropriate access for equipment
  - Need appropriate parking
  - Need appropriate area to set up and administer
  - Need to consider, children, animals, pets, guns, domestic violence
  - Whether a carer is available where needed
  - Must have a phone.
- ▶ May administer in other locations:
  - Workplace, university, other locations
  - Local clinic / other facility if home not appropriate.

## PEOPLE ADMINISTERING IN-HOME

Universally chemotherapy in the home setting was said to be administered by nurses:

- ▶ Mainly trained and experienced oncology nurses.
- ▶ One service used HITH nurses upskilled for chemotherapy administration.
- ▶ Mainly by nurses on their own - Occasional need for two nurses.



# THE NATURE OF CHEMOTHERAPY BEING DELIVERED IN-HOME

## WHERE CHEMOTHERAPY IS PREPARED

Preparation of chemotherapy to be administered in the home setting varied by model:

- ▶ Public HITH services - Sourced through the public hospital pharmacy and transported by HITH nurses.
- ▶ Private HITH services - Sourced through the private hospital pharmacy and transported by HITH nurses.
- ▶ Independent services - Could be sourced through private or public customer hospital pharmacies and transported by attending nurses. Could also be sourced from 3<sup>rd</sup> party compounding pharmacies who deliver to a central depot or deliver direct to the patient's home.

## HOW CHEMOTHERAPY IS ADMINISTERED

Chemotherapy administration in the home setting was said to involve a mix of gravity fed and infusion pumps:

- ▶ Some services mainly administered gravity fed infusions.
- ▶ Some used a mix of gravity fed and infusion pumps.
- ▶ Some used elastomeric pumps for suitable infusions while others did not use elastomeric pumps at all.
- ▶ Most used electromechanical, ambulatory, CAD pumps for some infusions.
- ▶ Administration approach could depend on whether the patients had a central line or not.

Public and private HITH services used equipment provided by their hospital. Independent private services could use equipment provided by their customer hospitals or their own equipment.

## LENGTH OF TYPICAL VISIT

The length of a typical home visit for chemotherapy administration was influenced by a number of factors:

### ▶ Strongly influenced by length of infusion:

- Most had some limit on infusion length for in-home treatment
- Maximum infusion lengths ranged from 1 to 3 hours - Varied across organisations and included 1 hour, 1.5 hours, 2 hours, 2 to 3 hours.

### ▶ Strongly influenced by the need for efficiency and cost effectiveness:

- Most tried to achieve a target number of visits per day - Generally 4 or more visits per day
- Driven by a need to be cheaper / cost neutral compared to hospital
- Driven by the need to be profitable within the context of a fixed fee.

### ▶ Generally between 1 and 3 hour visits: The average length of visit appeared to be 1.5 to 2 hours.

### ▶ Some exceptions to the rule:

- Some services did longer visits / longer infusions for a few patients
- Particularly where the infusions were fully funded
- Tended to be an exception to the rule.

# REASONS CHEMOTHERAPY IS BEING ADMINISTERED IN THE HOME

## REASONS CHEMOTHERAPY IS BEING ADMINISTERED IN THE HOME SETTING

Respondents mentioned a number of reasons why chemotherapy in the home setting is being used:

### ► PATIENT CHOICE, PATIENT PREFERENCE, PATIENT DEMAND - MOST MENTIONED:

- Is a general trend towards patient focused healthcare
- Some providers want to be proactive in providing patient choice / options
- Many / most patients said to prefer chemotherapy at home
- Patients are increasingly asking for chemotherapy at home.

### ► Reasons patients prefer chemotherapy at home:

- Patient convenience - Far more convenient than going to hospital
- Reduced cost burden - Transport, car parking, meals, etc
- Reduced time burden - For patients and carers / family
- Reduced anxiety, psychological impact of in-hospital treatment
- Increased safety - Less risk of hospital acquired infections
- Better patient experience overall.

### ► Some patients don't want chemotherapy at home:

- Prefer to have treatment in hospital
- Is part of patient choice - Patients have to agree to treatment at home
- Generally said to be few patients - Most prefer treatment at home.

### ► HOSPITAL CAPACITY CONSTRAINTS:

- A key reason some in-home services were set up - Particularly public
- A key driver of ongoing use / support for in-home services - Some services.

### ► Capacity constraints - A driver of openness to chemotherapy at home:

- More open to in-home treatment if there are capacity constraints:
  - ✓ Frees up hospital chairs / beds
  - ✓ Expands overall capacity.
- Less open where excess hospital capacity:
  - ✓ Is a need to fully utilise hospital capacity
  - ✓ In-home treatment cannibalizes hospital patients
  - ✓ Underutilisation of hospital capacity is a major barrier to in-home services in some organisations - Private and public hospitals.

### ► In-home treatment is faster, cheaper than building new facilities:

- The costs of building additional capacity are huge and take time
- It is easy and quick to put a nurse on the road
- In-home treatment is much cheaper than building a new day unit
- In-home treatment facilitates growth without increasing facilities.

# REASONS CHEMOTHERAPY IS BEING ADMINISTERED IN THE HOME

## ► PRIVATE HEALTH INSURANCE FUNDS:

- Said to be a major driver of private chemotherapy at home services.

## ► Some funds are embracing chemotherapy at home:

- Medibank Private is advertising at home services
- Some PHI Funds supporting it while others are still investigating
- Some PHI Funds are negotiating contracts with private providers - Are limitations.

## ► PHI Funds want to provide options for members:

- In-home chemotherapy is an attractive option for new and existing members
- In-home chemotherapy services may attract new members
- In-home chemotherapy is a trend – PHI Funds want to be proactive rather than reactive.

## ► PHI Funds want to gain savings:

- PHI Funds think there will be savings in payments to hospitals
- PHI Funds think it may prove cheaper than in-hospital treatment
- PHI Funds gain savings overall rather than at the individual patient level.

## ► Is consistent with government health reform agenda:

- Government health agenda pushing this way
- Funding in-home chemotherapy meets government health reform agenda
- Reflects what people want, reflects what government wants.

## ► CLINICIAN / SPECIALIST CHOICE OR PREFERENCE:

- In-home chemotherapy reliant on clinician referrals - Especially in private
- Positive clinician support and referral drives uptake of in-home services
- Negative attitudes / lack of referral is a barrier to uptake of in-home services.

## ► Changing clinician mindset / more are open to the idea:

- More specialists are warming to the idea of chemotherapy at home
- Particularly younger rather than older specialists
- Examples of haematologists willing to engage / refer patients
- Examples of oncologists engaging, agreeing on suitable in-home regimens, referring patients
- Examples where oncologists are not engaging or referring - Public and private.

## Reasons specialists support / refer patients for chemotherapy at home

### ► To support patients - To be patient focused:

- To provide appropriate patients with the choice
- To meet growing demand from patients - Patients are asking / demanding
- For greater patient comfort and support
- To reduce the financial impact - Travel, parking etc
- For patients who don't have transport
- Safer for patients - Less risk of hospital acquired infections.

# REASONS CHEMOTHERAPY IS BEING ADMINISTERED IN THE HOME

## Reasons specialists support / refer patients for chemotherapy at home continued ...

### ► To keep patients out of hospital:

- Keep patients out of hospital until they need acute care
- The notion of bringing healthcare to the patient until they need hospitalisation
- To free up beds / chairs where there are hospital capacity constraints.

### ► Chemotherapy at home is an entrenched behaviour - One public HITH service:

- Been doing chemotherapy at home for years
- Certain regimens / chemotherapy types are routinely done at home
- Oncology / haematology been fully supporting chemotherapy at home for years
- New doctors just fit into entrenched practice - Little questioning / resistance.

### ► Positive clinician experiences drive ongoing referral:

- Specialists only refer patients if they have confidence, faith in service
- Specialists will support chemotherapy at home if easy to access and implement
- Positive feedback / positive patient experience drives ongoing referral.

### ► Specialists encouraged by hospital / department administration:

- Where in-home services strategically important to hospital / department
- Where in-home services seen as a way to manage capacity constraints.

## ► OTHER REASONS DRIVING USE OF CHEMOTHERAPY IN THE HOME:

### ► Government policy:

- Hospitals are expensive to build and are a fixed resource
- Government is looking for more sustainable ways to manage resources and to meet the needs of patients.

### ► Can provide savings to a public hospital:

- Chemotherapy administered in-home is cheaper than an overnight stay in hospital
- Chemotherapy administered in-home is cheaper than paying for transport to day centre.

### ► Part of growth strategy:

- Hospital sees cancer services as a major growth opportunity
- Wants an integrated service offering - Palliative care, diagnostics, radiotherapy, in hospital services, at home services etc.

### ► Model is in place:

- Have the funding, have the infrastructure and staff in place
- Having all those things in place encourages use.

### ► Passionate business founder:

- Has a passion for chemotherapy administered in the home
- Is a major driver of in-home service development.

# ADVANTAGES AND DISADVANTAGES OF CHEMOTHERAPY AT HOME

## ADVANTAGES OF CHEMOTHERAPY ADMINISTERED IN THE HOME SETTING

### ► Better for patients, carers and family - Most mentioned:

- More convenient for patients, reduced burden on patients
- Save on transport, parking, associated costs
- Less time associated with going to hospital, time off work
- Less displacement / disruption for patients, family and carers
- Helps maintain patient quality of life
- Promotes patient independence and control
- Helps normalise life for working patients
- Avoids psychological impact of hospital / day centre / treatment
- Avoids patients being institutionalised in hospital
- Safer - Less risk of hospital acquired infections
- Is a better patient experience - Patients like the in-home chemotherapy service.

### ► Provides choice for patients:

- Is a trend towards patient choice in healthcare
- Patients increasingly expect to have choice in their own healthcare
- Fits with other options / choices provided to patients - Especially in the private sector
- Is one more choice / option for patients.

### ► Cheaper / more cost effective than hospital:

- Can be more cost effective / cheaper than hospital or day centre
- Some treatments / regimens are more cost effective / cheaper than hospital or day centre (but others are not).

### ► Frees up hospital resources:

- Can free up hospital beds / chairs
- Can help alleviate hospital capacity constraints.

### ► Cheaper than building new hospital facilities:

- An alternative to building new hospital / day care facilities
- Can save money on capital expenditure.

### ► May provide strategic advantages for hospitals:

- Allows growth without capital expenditure
- May provide a competitive advantage over other hospitals.

### ► Is an established / accepted working model:

- In-home service is well resourced with hospital administration support
- Is an entrenched a part of cancer care
- A stable proven model.

### ► Provides continuity of care:

- In-home service tends to be the same nurse over time
- Can develop a good relationship, trust, communication etc
- Can provide a unique one-on-one continuity of care over time.

# ADVANTAGES AND DISADVANTAGES OF CHEMOTHERAPY AT HOME

## DISADVANTAGES OF CHEMOTHERAPY ADMINISTERED IN THE HOME SETTING

A number of perceived disadvantages of chemotherapy in the home setting were mentioned by respondents:

### ► Nursing inefficiencies at home - Most mentioned:

- One nurse can see 4 or 5 patients in hospital / day centre
- HITH nurse can only see one patient at a time in-home
- Fewer patients per nursing hour / less revenue per nursing hour.

### ► Can't do some chemotherapy in-home - Highly mentioned:

- Regimens with long infusion times
- Consumes too many resources - Not economically viable
- Cheaper to do it in hospital or day centre.

### ► Can't service some locations - Need efficiency:

- Non-metro not financially viable
- Areas where small numbers of patients may not be financially viable
- Can only service patients where efficient and financially viable.

### ► Are funding limitations:

- Are limitations on what PHI Funds will cover
- Australian Health Alliance - Will only fund infusions up to 3.5 hours
- Can only undertake treatment in home that is covered by funding.

### ► Some specialists won't support in home treatment:

- Some specialists don't see in-home treatment as a viable alternative
- Some specialists think they will lose money with in-home treatment.

### ► The risk of side effects / adverse reactions:

- SE/AR are always a possibility
- Need to manage the risks associated with SE/ARs.

### ► Lack of contact with other patients:

- Some patients like the camaraderie of other patients around them in hospital
- Don't get other patient contact in the home setting.

### ► Other disadvantages:

#### ▪ Don't see consultant every treatment cycle:

- ✓ Contrasts with seeing specialist each cycle when in hospital / day centre

#### ▪ In-home treatment consumes lots of resources:

- ✓ Resources to keep it all running smoothly
- ✓ Can create inefficiencies - A need to monitor and improve.



# HOW CHEMOTHERAPY IN THE HOME SETTING IS FUNDED

## HOW CHEMOTHERAPY ADMINISTERED IN THE HOME SETTING IS FUNDED

► **Main sources of funding:** At a summary level the main sources of funding for chemotherapy in the home setting were as follows:

- Public hospital HITH services - Same funding as general HITH services
- Private hospital HITH services - Private health insurance funds
- Private independent HITH / Infusion services:
  - ✓ Mainly private health insurance funds - The vast majority of patients
  - ✓ Contracts with state / federal government
  - ✓ Contracts with private and public hospitals
  - ✓ Pharmaceutical companies needing in-home treatment services
  - ✓ Self funded patients wanting in-home treatment services.

► **Funding of administration and nursing:**

- PHI fund private services - Covers nurse and administration
- But varies by fund - A range of limits, conditions, approval processes
- Private in part funded via MBS numbers
- Public HITH models - Same funding as any general HITH service.

► **Funding of consumables:**

- Provided by public hospitals / HITH services
- Covered by fees from PHI Funds in private
- Claim on MBS numbers where available.

► **Funding of chemotherapy medications:**

- Claimed on PBS by compounding hospitals / pharmacies
- Supplied to some private services by compounding hospital customers
- Supplied to public HITH by hospital pharmacy - Same funding as day centre
- Oral and subcutaneous injections not funded:
  - ✓ Not admitted to hospital for oral or subcutaneous - Not substitution
  - ✓ Most private and public services don't provide subcutaneous
  - ✓ Unless funded in some other way.

► **Funding of equipment:**

- Private health insurance funds will rebate use of pumps / equipment
- Private services own their own equipment
- Private services may use public or private hospital equipment
- Public HITH models - Same funding as HITH service - Hospital equipment
- Claim on MBS numbers where available.

► **Out of pocket cost to the patient:**

- No out of pocket expenses for public patients - Same as HITH
- Few out of pocket expenses for private patients:
  - ✓ Generally covered by PHI Funds
  - ✓ Can vary depending on policy coverage - Level of extra cover
  - ✓ May need to pay an excess for hospital admission
  - ✓ Same costs as private infusion centre.

# FUTURE POTENTIAL FOR CHEMOTHERAPY IN THE HOME SETTING

## FUTURE POTENTIAL FOR CHEMOTHERAPY ADMINISTERED IN THE HOME SETTING

There were a variety of opinions about the future potential for chemotherapy administered in the home setting:

### ► Mixed views of potential for chemotherapy at home in the private sector:

- Independent private services expect continued growth over time
- Private hospital HITH services had mixed views including:
  - ✓ Limited growth until there is a mind shift by private oncologists
  - ✓ Likely to be a sizable segment - Maybe up 10% or 20% of all administrations
- Some thought it would be more niche in the short term followed by significant growth in the medium term
- Some thought it would be mainstream in the medium term
- Future potential was said to depend on what the PHI Funds do, the availability of MBS numbers, and government policy.

### ► Mixed views of potential for chemotherapy at home in the public sector:

- Some thought chemotherapy administered in the home setting is likely to grow significantly in the public sector
- One respondent anticipated limited growth and uptake because not it is unlikely to be economically viable
- Future potential was said to depend on the ability to be economically sustainable, availability of funding, and government policy.

### ► Generally positive views about growth overall:

- While there were mixed views, most respondents predicted growth over time in the use of chemotherapy administered in the home setting
- Particularly in the private sector driven by PHI Funds
- Also in the public sector if it can be shown to be economically viable and sustainable.

Potential drivers and barriers to the uptake of chemotherapy administered in the home setting are discussed on the following pages.

# DRIVERS AND BARRIERS TO CHEMOTHERAPY IN THE HOME SETTING

## DRIVERS OF UPTAKE OF CHEMOTHERAPY ADMINISTERED IN THE HOME SETTING

Respondents mentioned a number of potential drivers of uptake and adoption of chemotherapy administered in the home setting:

### ► Patient choice / demand, positive patient experience - Most mentioned:

- Will be increasing demand with increasing awareness of in-home services
- Patients are asking for it, requesting it, demanding it
- Is a trend towards patient choice - Patients increasingly expect choice
- Significant advantages, benefits for patients having treatment in-home
- Patient experience with in-home service is positive - Drives ongoing use.

### ► Private health insurance funds:

- Private sector services are almost totally dependent on PHI funding
- PHI Funds likely to support chemotherapy in-home because:
  - ✓ It is an attractive offer for existing members
  - ✓ It may attract new members
  - ✓ PHI Funds can save money - Cheaper than in-hospital treatment
- Medibank Private is driving awareness in both private and public:
  - ✓ Creates demand for in-home treatment generally
  - ✓ Creates demand in the private sector specifically.

### ► Helps overcome capacity constraints:

- Some hospitals are at full or near full utilisation
- In-home treatment frees up hospital capacity.

### ► Cheaper than building new hospital facilities:

- In-home treatment allows growth without capital investment in new facilities
- Hospitals could offset capital investment and maintenance costs of new facilities.

### ► Support from clinicians / specialists:

- Dependant on specialists referring patients - Private and public
- An increasing proportion of specialists are supportive of in-home services
- Particularly younger, more open minded specialists
- Haematologists big drivers at one public hospital - Capacity constraints
- Strong specialist and department support at another public hospital.

### ► If private clinicians can make an income:

- Loss of consulting fees a major barrier to uptake in private
- An ability for private consultants to make an income would drive uptake
- Introduction of appropriate MBS numbers would drive uptake
- If PHI Funds decide to pay specialists for their services.

# DRIVERS AND BARRIERS TO CHEMOTHERAPY IN THE HOME SETTING

## DRIVERS OF UPTAKE CONTINUED ...

### ► Will be funded if cheaper / cost effective in public HITH:

- If can show public HITH is revenue neutral or revenue positive
- If cheaper than hospital, it generates savings for the hospital
- If same cost as hospital, it frees up capacity, gives patients choice
- Could be cheaper than capital investment and maintenance costs for new facilities.

### ► Macro trends - Increasing numbers of cancer patients:

- Aging population
- Increasing population
- Increasing numbers of cancer patients
- Increasing demand for cancer services
- Chemotherapy in-home likely to be driven by increasing demand generally.

### ► Cancer becoming a chronic disease:

- Cancer patients can live for years rather than months
- Cancer treatment can go on for years
- Cancer is becoming a chronic disease
- There is a growing cohort of ongoing maintenance therapy patients
- Chemotherapy in-home perfectly suited to the needs of some patients.

### ► New cancer treatments suitable for in-home administration:

- New targeted cancer therapies, immunotherapies
- Easier and safer to deliver generally and in-home
- Perfectly suited to in-home services - Could drive uptake.

### ► Increasing numbers of non-cancer / non-chemo infusions:

- Increases demand / places pressure on infusion centre capacity
- In-home chemotherapy services free up internal capacity
- Could help drive uptake of in-home chemotherapy services.

### ► Politicians and government policy:

- In-home care consistent with government's health reform agenda
- In-home care seen as an effective way to keep patients out of hospital
- In-home care provides patient-centric healthcare and patient choice
- Politicians and government likely to support concept of in-home care.

### ► Other drivers of uptake:

- Champions of chemotherapy at home
- Part of hospital growth strategy
- If a clear model can be developed:
  - ✓ HITH Society working with oncologists / haematologists to generate consensus agreement about a clear and safe model
  - ✓ Driven by visionaries, champions, thought leaders.

# DRIVERS AND BARRIERS TO CHEMOTHERAPY IN THE HOME SETTING

## BARRIERS TO UPTAKE OF CHEMOTHERAPY ADMINISTERED IN THE HOME SETTING

Respondents mentioned a number of potential barriers to the uptake and adoption of chemotherapy administered in the home setting:

### ► Clinician attitudes - Most mentioned:

- Some clinicians are sceptical, don't support
- Some want to keep doing what they have always done
- Little incentive for specialists to change
- Some think it is too difficult, too time consuming
- If don't support in-home model won't refer patients - Public and private.

### ► Loss of clinician fees in private sector:

- Specialists can't charge consulting fees for in-home service - No MBS numbers
- Some private clinicians think they will lose money
- Loss of fee revenue thought to be a key barrier in private sector.

### ► Economics and funding limitations:

- Limited to what private health insurance funds will cover
- Limited by the need for economic efficiency and sustainability
- Needs to compare favourably with in-hospital / day centre treatment
- Oral and subcutaneous not funded for in-home administration
- QLD Health funding model said to not suit public HITH in-home chemotherapy administration.

### ► Lack of skilled staff:

- Not all oncology nurses are suited to in-home administration
- Can be hard to find and recruit experienced oncology nurses
- Lack of skilled staff availability limits ability to expand in-home services.

### ► Underutilisation of hospital facilities:

- In-home services compete with hospital facilities for patients
- Some public and private hospitals have excess hospital capacity
- Likely to prioritise filling hospital beds / chairs over in-home service if spare hospital capacity exists
- Particularly in private hospitals but also in some public hospitals
- Higher resistance to in-home services when excess hospital capacity exists.

### ► Hospital administrator resistance:

- Some hospital administrations don't support in-home treatment services
- In-home services seen to threaten traditional / accepted model of care
- In-home services seen to threaten / are not consistent with current funding model
- Some hospital administrations are resistant to change.

# DRIVERS AND BARRIERS TO CHEMOTHERAPY IN THE HOME SETTING

## BARRIERS TO UPTAKE CONTINUED ...

### ► Can't do some chemotherapy in-home - Highly mentioned:

- Regimens with long infusion times - Not economically viable
- Regimens with high risk of reactions - Too risky, need monitoring
- Regimens not funded in-home - Subcutaneous.

### ► Some cancer patients not appropriate for in-home treatment:

- Patients outside in-home service geographic boundaries
- Patients who have reactions in hospital
- Patients who don't have an appropriate home environment.

### ► There are resource limitations:

- In-home services have a finite capacity
- Have limited resources available - Cars, staff, available time.

### ► Quality, risk management, provider risk appetite:

- Risk management and risk mitigation are core requirements
- Some clinicians / administrations don't want to take on the risk
- Some clinicians don't want the risk with some chemotherapy regimens.

### ► Some patients don't want in-home treatment:

- Prefer in-hospital treatment.

### ► Other barriers to uptake:

#### ▪ Trend away from IV chemotherapy:

- ✓ Towards oral and subcutaneous treatments
- ✓ Subcutaneous not funded for in-home care - Barrier to use of in-home service.

#### ▪ Cost of non-PBS drugs:

- ✓ Not funded for in-home care - Barrier to use of in-home services.

#### ▪ Legislative barriers:

- ✓ Federal legislation allows substitution
- ✓ But no licencing system for in-home providers at state level
- ✓ No standards for administering chemotherapy in the home
- ✓ Creates risk issues for private service providers.

#### ▪ A lack of understanding:

- ✓ People are trying to grapple with the concept
- ✓ Trying to understand the dynamics and economics of in-home chemotherapy
- ✓ A lack of understanding is a barrier to uptake.



# CRITICAL SUCCESS FACTORS FOR CHEMOTHERAPY IN THE HOME

## CRITICAL SUCCESS FACTORS FOR CHEMOTHERAPY ADMINISTERED IN THE HOME SETTING

Respondents mentioned a number of critical success factors (CSFs) for chemotherapy administered in the home setting:

### ► Adequate funding model:

- Willingness of PHI Funds to fund in-home chemotherapy treatment
- Availability of funding for public HITH oncology services.

### ► If in-home services can generate savings:

- Savings for PHI Funds, savings for public hospitals
- If can free up resources for reallocation
- Savings for the government overall.

### ► If can illustrate positive outcomes:

- If in-home service outcomes are positive
- If can show low readmission rates, high quality of care, few problems.

### ► Driving public awareness:

- Awareness of in-home services will drive patient demand
- If PHI Funds / Medibank private continue to generate awareness.

### ► Patient satisfaction:

- Positive patient experience / satisfaction will drive ongoing patient demand
- Positive patient experience will encourage clinicians to refer.

### ► Clinician support:

- Totally reliant on clinicians to refer patients for in-home treatment
- Ability to generate clinician support will drive uptake and use.

### ► Clinician education:

- Education about the effectiveness and safety of in-home treatment
- Education about benefits to hospitals and patients of in-home treatment.

### ► Ability to get skilled staff:

- Dependant on ability to get skilled staff - A scarce resource
- A lack of skilled staff will limit expansion and uptake
- Availability of skilled staff will drive expansion and uptake.

### ► Having flexible, passionate part time staff:

- Creates flexibility to match resources to workload
- Provides an ability to increase or reduce resources as required.

### ► Better use of technology:

- Systems integration between private services and hospitals
- Could allow access to / provide feedback on patient progress.

# CRITICAL SUCCESS FACTORS FOR CHEMOTHERAPY IN THE HOME

## CRITICAL SUCCESS FACTORS CONTINUED ...

### ► Having an integrated model:

- Totally integrated with hospital wards and day centres
- A reason / basis of in-home service success.

*"Without an adequate funding model the sector won't develop to its full potential."*

*"We are totally dependant on what the private health insurance funds do and what they are willing to fund. So we are in their hands."*

### ► Fitting in with private day oncology:

- In-home services potentially compete with day oncology
- Need to fit in with, complement day oncology
- Focus on patients with travel problems - Who could benefit at home.

*"If it can show effective savings for the private health funds and for the government overall."*

*"If it generates savings for the hospital or is cost neutral and frees up beds and chairs. It has to be economically viable."*

### ► HITH and oncology / haematology consensus:

- HITH Society / COSA / HSA NZ consensus on in-home treatment
- Decide what can and can't be done in home
- Decide which patients and which treatments are suitable for in-home administration
- Issue guidelines / best-practice model for chemotherapy delivered in home setting.

*"Clinician attitudes. There is some scepticism from the older players, the conservative. It's the younger ones that are driving in-home care."*

*"Oncologists and haematologists must be engaged, they must believe it is good for the system."*

### ► Working with sector champions:

- To work with, to advocate for in-home chemotherapy services.

*"If you have 12 chairs and 4 nurses the economics are not the same. But if you consider capital costs to increase facilities then the equation comes back significantly."*

*"There needs to be more discussion about cancer care in the HITH field, a national discussion involving all stakeholders."*

*"Nationally, we have to get the HITH fraternity to work with oncologists to agree on what can and cannot be done in the home setting. If there are agreed guidelines there will definitely be increased take-up."*

### SUMMARY CONCLUSIONS - MAIN DRIVERS OF CHEMOTHERAPY ADMINISTERED IN THE HOME SETTING

This market research was based on a small qualitative sample and was extremely exploratory. Within this context, we came to a number of summary conclusions:

**Newly established sector:** The in-home chemotherapy treatment sector appears to be in its infancy with significant growth potential over time. More established providers appear to be viable and growing in both private and public sectors. However, the economic viability of some newer entrants appears to be in question in both private and public sectors. Hence, it is difficult to draw strong conclusions about the economic viability of the sector as a whole based only on the information collected in this research.

**PHI Funds are driving private sector:** A positive indicator for private in-home cancer treatment providers is the significant activity and support from private health insurance funds including the provision of funding, the generation of consumer awareness via advertising, and the significant investment in-home care services by some (like Medibank Private). If this interest and support continues, the future appears positive for private in-home cancer treatment services.

**Limited hospital capacity a core driver of public sector:** A key driver of public in-home cancer treatment services appeared to be a lack of public hospital infusion capacity. In-home cancer treatment services appear to be a fast and relatively cheap way to supplement public hospital infusion capacity without capital investment in new infusion facilities. Public HITH services appear to be the most logical way for public hospitals to introduce chemotherapy administered in the home setting (where such services can be economically sustainable). We suspect the future is positive for HITH services in public hospitals with capacity constraints.

**Consumer choice, consumer demand a generic driver:** The trend towards consumer choice in healthcare generally, and a trend towards more in-home treatment specifically (including cancer treatment), are generic drivers of uptake of chemotherapy administered in the home in both the private and public sectors. Hence, where in-home cancer treatment services are available and economically viable, consumer preference and demand is likely to be an ongoing driver of uptake and use.

**Government policy and reform agenda drives uptake:** A desire by government and health departments to minimise acute hospital admissions, minimise the length of acute hospital stay, maximise HITH substitutions, and maximise in-home healthcare delivery, is likely to remain an underlying driver of uptake and support for in-home cancer treatment services - A positive indicator.

**Clinician attitudes - A driver and barrier:** The in-home chemotherapy treatment sector relies on clinician support in the form of referring appropriate patients. This research showed some clinicians were willing to support in-home chemotherapy treatment services (drivers of uptake and use), while other clinicians were not (barriers to uptake and use). We concluded that a critical success factor for the future of in-home cancer treatment will be the degree of active support provided by clinicians, an unknown at the time of the research.

### SUMMARY CONCLUSIONS - MAIN DRIVERS OF CHEMOTHERAPY ADMINISTERED IN THE HOME SETTING CONTINUED ...

**Positive macro trends:** Australia's aging population, the increasing numbers of cancer patients, and the increasing lifespans of cancer sufferers are all trends that underly the increasing demand for cancer services, and potentially the demand for chemotherapy administered in the home setting - A positive indicator.

#### Summary conclusions

At a summary level, we concluded the future for in-home cancer treatment appears to be positive, albeit early days in the development of this new cancer treatment delivery approach. We also concluded there are a number of unknowns that could impact on the longer term potential of this emerging sector.

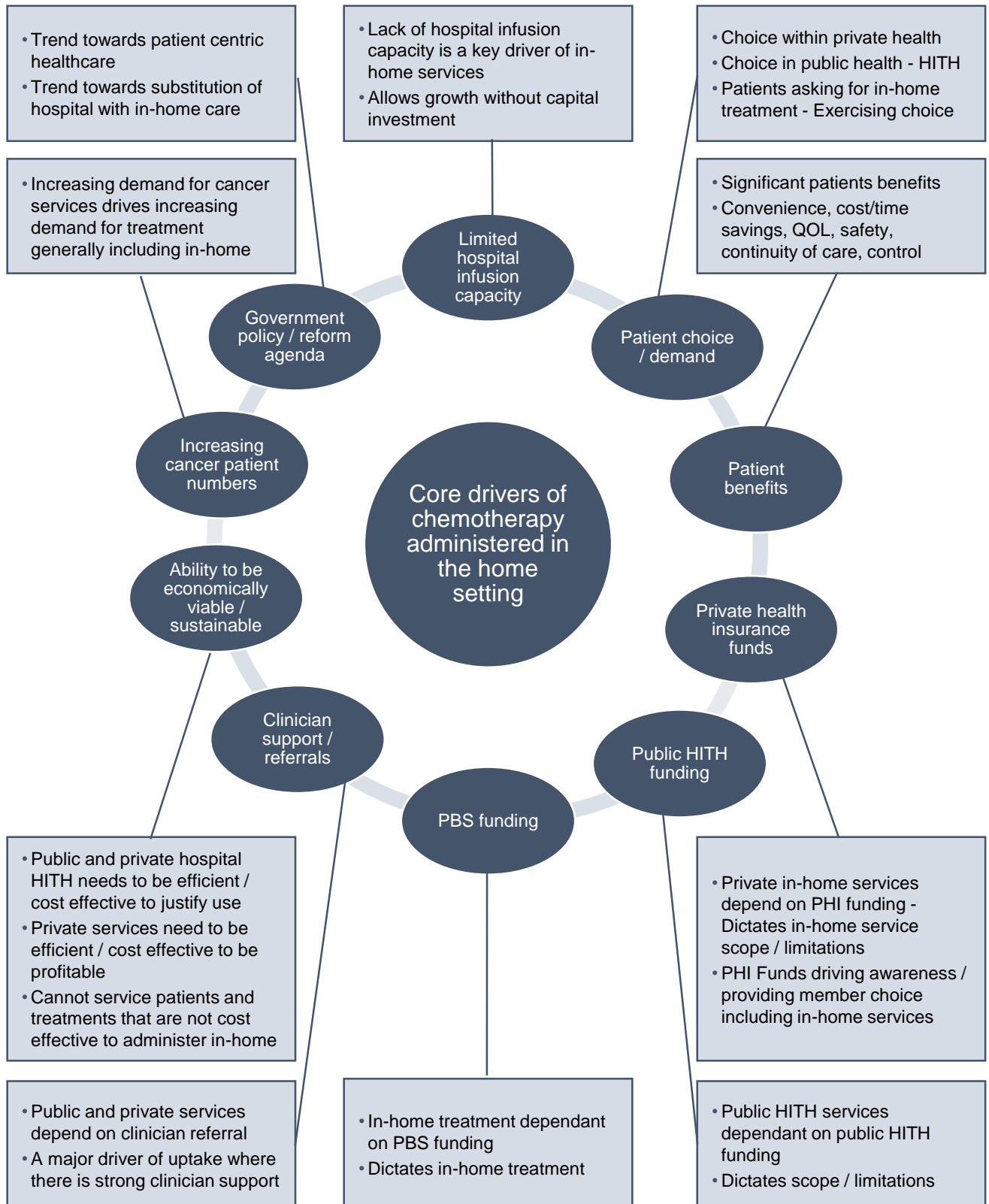
We concluded peak professional bodies including the HITH society, the Clinical Oncology Society (COSA) and the Haematology Society of Australia and New Zealand (HSANZ) could play a pivotal role in the development of consensus position statements, guidelines and best practice models of service delivery for chemotherapy administered in the home setting. Such initiatives would be major drivers of uptake of chemotherapy delivered in the home setting.

We concluded universal support and funding from private health insurance funds would be a core driver of uptake of chemotherapy delivered in the home setting in the private health sector. A lack of consistency across private health insurance funds, as is the case at present, will impede the rate of uptake and long term potential of this emerging sector. Development of consensus position statements and appropriate funding mechanisms by the peak body Private Healthcare Australia (PHA), would help facilitate uptake in the private health sector.

We concluded industry stakeholders such as Baxter Healthcare, can play an instrumental role in the development of this emerging sector, particularly by facilitating discussion between stakeholders, by facilitating development of consensus positions and best practice guidelines, by supporting appropriate education and training, and by aligning its products and services with the specific needs of chemotherapy delivered in the home setting.

Overall, we concluded chemotherapy delivered in the home setting is an exciting development with significant potential in both private and public health settings. The challenge for all stakeholders is to develop and implement best practice service delivery models, backed by appropriate funding mechanisms, designed to meet the needs of appropriate private and public cancer patients across Australia.

# CORE DRIVERS OF CHEMOTHERAPY IN THE HOME SETTING



## SELECTED RESPONDENT COMMENTS

### SUITABLE PATIENT TYPES

*"Any patient subject to funding. They would be unsuitable if they were clinically unwell, unstable or at risk of an adverse reaction. So most people so long as there is an appropriate funding mechanism."*

*"Most patients are suitable. We take them from all demographics. Young people who don't like hospitals, young families caring for children, professionals do better because they are in control, older people with poor access to transport, who rely on a carer or family, feel like a burden, people with disabilities often get disoriented in hospital."*

### SUITABLE TREATMENT TYPES

*"All of them. Anything that is funded. It depends on the disease load, the aggressiveness of treatment, the stage of treatment. If it was high dose chemo that required 24 hour monitoring we wouldn't do it but oncologists wouldn't consider patients suitable. So if it funded it's ok."*

*"All can be given. Funding is the main issue, i.e. Medicare rebates etc. Subcutaneous is not funded so no sub-cut. So clinicians will use IV even though some sub-cut is better."*

*"We chose the products in conjunction with the cancer service mainly because they have few adverse reactions."*

*"Anything longer than one hour is uneconomical. The nurse is \$48 to \$50 per hour. If it's over 2 hours it is not cheaper than the infusion centre. We are striving for 5 visits per day, 4 minimum. Any less and it's marginal. We have to consider the costs of the infusion centre."*

*"Economics, the time to administer. If it's too long they won't do it. It makes economical sense to not do an 8 hour infusion. But if someone is willing to pay for the longer infusion it will happen."*

### THE HOME ENVIRONMENT

*"We go through a process. We have a checklist and do a risk analysis - appropriate access to the house, their social situation, pets, animals, their living situation. It's done via a questionnaire. So long as we have a clean area the nurse can work from then it's generally ok."*

*"There is a financial element to the geographical decision. We can't run at a loss so we have to look at the efficiencies when planning the runs."*

### WHERE CHEMOTHERAPY IS PREPARED

*"It's not made up at home. It's all done under a sterile hood at the hospital. So we collect it from the hospital."*

*"It's easier to maintain a relationship with the hospital if we are picking up the chemo from the hospital."*

*"We use a compounding pharmacy who delivers to the patient's home in an esky to maintain the cold chain. The patients are told not to touch it until the nurse arrives. They also do our IV antibiotics."*

### METHOD OF ADMINISTRATION

*"We do IV via central line where we mainly use pumps. We also do peripheral lines mainly gravity fed. So we do it all. Generally they have had their 1<sup>st</sup> cycle in hospital and then go home for the 2<sup>nd</sup> cycle."*

*"If the contract is with a public hospital they will supply the pumps because the patient is still a hospital patient. For private patients we use our equipment. A lot of it is gravity fed. Some electromechanical but mostly gravity fed."*

*"For BMT it is traditionally an electromechanical pump. The nurses prefer them. There is more control than elastomeric pumps which are not as precise and have varying infusion rates."*



## SELECTED RESPONDENT COMMENTS

### REASONS HOME CHEMOTHERAPY IS USED

*"Twelve people in chairs around you at various stages. It can be very difficult to deal with, very confronting. So you don't have to deal with that at home and you can have your family around you."*

*"We had patient feedback about the parking, the need to keep going in for a relatively simple treatment. We monitor patient requests and preferences."*

*"We have 3 one day centres and they were busting at the seams, so there was a lack of capacity. It's costly to build and it's cheaper to have a car and some nurses."*

*"So many people see private health insurance as not worth it and this is desirable. So the right products and policies attract people and people want close and in-home healthcare."*

*"The haematologists were willing to cooperate and refer. They were willing to engage. The oncologists didn't want to engage and it's the same here."*

*"Some doctors don't think it's appropriate but some now want to save hospitalisation until patients are really sick. So doctors are tailoring treatment according to need - keep them out of hospital until they need acute care."*

### DRIVERS OF UPTAKE

*"Patients love it, so patient demand. They talk to each other. It's a good experience."*

*"The health funds because it is an attractive offering and because they can make money because it's cheaper in home than in hospital."*

*"The hospitals are struggling to deliver. The only way to solve the logistical problems is to do more at home. And there are better outcomes, less infection, more patient control."*

*"Where utilization is full, it is cheaper at home than to expand facilities. If they don't offer in-home, hospitals must increase day chemo capacity. The capital investment creates underlying costs and they have to wait for facilities to be built. At home is available now."*

*"The way the department runs and the support from specialists. We go in for daily meetings on the wards and day centre. We can do that at home or that person at home. So we pull and they push."*

*"There has to be a viable business case. If it is cost neutral and patient demand then yes. But the operational dollars must stack up. And the opportunity cost if it frees up beds then yes. So we are beholden to a year on year result and we have to show we are cost neutral within a year."*

### BARRIERS TO UPTAKE

*"Clinician uptake. They need to drive referrals. If they don't believe in the model it won't go anywhere. That's why the model needs to be co-designed with oncologists and haematologists. And it needs to be easy to use."*

*"Funding will be critical. So if remuneration is adequate the sector will move forward. But if remuneration is not adequate then the hospital won't stay in it."*

*"The private hospitals are trying to get people into chairs and beds. They will not support in-home services if it means missing out on patients in hospital chairs and beds."*

*"The limits of the infrastructure, cars, staff, how far we can travel, drug safety, environment safety. So there are limitations." - Public*

*"People are trying to grapple with the concept and where the potential gains are. But there is a general lack of understanding of the dynamics and economics."*



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