INFORMATION BRIEF (RAPID REVIEW)

HOME INFUSION THERAPY

Malaysian Health Technology Assessment Section (MaHTAS)
Medical Development Division
Ministry of Health Malaysia
004/2024

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Available online via the official Ministry of Health Malaysia website: http://www.moh.gov.my

eISSN:

SUGGESTED CITATION: Fatin NM and Izzuna MMG. Home Infusion Therapy. Information Brief. Ministry of Health Malaysia: Malaysian Health Technology Assessment Section (MaHTAS); 2024. 13 p. Report No.: 004/2024. eISSN: ……

DISCLOSURE: The author of this report has no competing interest in this subject and the preparation of this report is entirely funded by the Ministry of Health Malaysia.

TITLE: HOME INFUSION THERAPY

PURPOSE

To provide brief information on the effectiveness, safety and financial implication of home infusion therapy.

BACKGROUND

According to the National Home Infusion Foundation Trends 2020 Report, home and specialty infusion is a $19 billion industry that serves more than 3.2 million patients annually.[1] Formerly, the older population has driven the demand for home care services. More recently, younger populations have fuelled demand by choosing elective procedures in outpatient settings, which frequently necessitate follow-up home care.[2] During the coronavirus disease 2019 pandemic, elective surgeries were suspended, resulting in a decreased requirement for follow-up home care.[3] Despite the pandemic's short-term detrimental impact on hospital inpatient admissions, the home infusion industry remained adaptable and is anticipated to grow at a 7.5% annual pace until 2028.[4] This trend is anticipated to continue for the foreseeable future as a result of lower healthcare costs due to shorter inpatient stays and more options for infusion devices.[2]

Home infusion treatment offers efficient and successful administration methods in the patient's own home. Therapies include, but are not limited to intravenous (IV) administration of various antimicrobials, total parenteral nutrition, patient-controlled analgesia, inotropes, home hydration, immunoglobulins and other immunomodulating agents delivered via a variety of routes, giving patients greater control over their own care. To be eligible for home infusion, patients must be discharged home with a vascular access device that facilitates IV medicine administration. These devices include peripheral venous catheters, midlines and central venous catheters, as well as peripherally inserted central catheters and ports. Notably, certain drugs do not require IV access and can be injected subcutaneously or intramuscularly, which home infusion companies may also accommodate.[2]

Safe and effective home infusion therapy is a top priority in designing a care plan. In 2018, a technical expert team supported by the Centres for Medicare and Medicaid Services, highlighted three areas to consider: (1) Patient health and clinical appropriateness, (2) home environment, and (3) carer competency.[5] Moreover, home infusion therapy demands a supportive carer who is motivated, capable and eager to help the patient. While the home health care service or infusion pharmacy nurse may provide training and support throughout treatment, the patient and carer are ultimately responsible for daily infusions. Early discharge planning is crucial for family carers to prepare for difficult infusion care at home.[6]

When deciding which vascular access device to send the patient home with, a doctor must consider numerous criteria, including the duration of therapy. A peripheral venous catheter may be considered if the clinician is sending the patient home after one to five days of therapy, as a peripheral venous catheter can remain in place for three to five days before being removed or replaced. A midline may remain for up to four weeks, whereas central venous catheters may reside for months to years per patency.[7] There are however, additional aspects to consider before selecting a specific vascular access device. For example, the osmolarity and/ or pH of the medicine may determine whether it can be given by a peripheral line or a central line. Furthermore, if the medication is likely to produce extravasation (also known as a vesicant substance), it must be supplied via a central venous catheter. Other drugs like as

vancomycin, are known to cause irritation. However, if formulated at a lower dose, it can be fed through a catheter.[2]

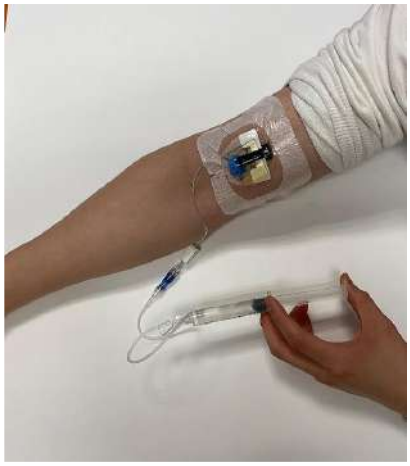

Figure 1: Intravenous push administration.[2]

Figure 1 shows an IV push; widely regarded as the preferred mode of administration by patients because of its convenience of usage. This approach involves rapidly administering a tiny volume of medication into a patient's vein via an IV catheter, often over a few minutes.[2]

Even though hospital-based infusion therapy provides more extensive monitoring and access to a wide range of medical professionals, there are other aspects to be considered. It can be costly, particularly when considering hospital and clinic bills. Patients who must travel to a hospital or clinic for treatment may also find it inconvenient. For individuals with mobility limitations, travel adds to an already long day.[8] These are the reasons why home infusion therapy is introduced. However, some of the barriers to implement home infusion more broadly are perceived concerns about limited reimbursement (depending on the drug product and indication) and resistance to changing the status quo (real or perceived technical hurdles are greater for unfamiliar settings of care). Moreover, the rise of safety issue regarding the potential risk of adverse events during infusion and general drug toxicity can be attributed to the lack of direct physician presence in the home setting.[9] Hence, remote patient monitoring is required to employ equipment and technology at patient's home and to send health information to specialists' team. Throughout the programme, patient's vital signs and symptoms will be routinely monitored. The patient will also be educated about the disease on a regular basis.[10]

The home infusion therapy market is claimed to have a strong growth trajectory. The therapy market is expected to reach USD 14,618 million by 2030, with a compound annual growth rate (CAGR) of 8.9% in Europe (Greece, Finland, Belgium, United Kingdom, Germany, France, Spain, Italy, Russia, Nordic and Benelux), and USD 10,055 million by 2030, with a CAGR of 10.2% in Asia Pacific (India, Japan, Australia, South Korea, Malaysia, Indonesia, Singapore, Philippines and Thailand). There are numerous numbers of top key players in home infusion therapy market share such as [redacted], etc.[13,14]

Among them, there is a Greece company [redacted]), a dynamic medical technology firm that develops, manufactures and markets drug delivery devices. The company provides a complete line of ambulatory infusion pumps and associated disposables for a variety of hospital and home-based patient treatments. [redacted] ambulatory infusion pumps have been created to fulfil the demands of patients and those supporting them. The [redacted] range includes:[15]

[redacted] Infusion Pumps

(a) **(b)** **(c)** **(d)**

Figure 2: **(a)** [redacted] **Evolution Blue**; a truly ambulatory solution for acute and palliative care management, as well as other continuous infusion therapies such as antibiotic infusion, cystic fibrosis, primary pulmonary hypertension and intravenous immunoglobulin, **(b)** [redacted] **Evolution (Yellow)**; with the ability to use programmed intermittent epidural bolus, it enables greater mobility during childbirth, which may aid a timely birthing experience with less complication, **(c)** [redacted] with infusion rates from 0.1 to 400.0 ml/hr and a variety of infusion mode choices: auto ramp, intermittent, continuous, volume/time and 25 steps, it can be used for any high-demand continuous infusion treatment such as parenteral nutrition, chemotherapy, immunotherapy and antibiotics infusion therapies, and **(d)** [redacted]; its portfolio is suitable for different medical applications including oncology, haematology and long-term chemotherapy infusions.

[redacted]

Figure 3: An innovative web-based care management tool designed to make patient monitoring an everyday practice. Healthcare providers can monitor the instant view of infusion status at 24 hours/day, receive clinical feedback for the patient, receive alerts in response to technical and clinical events and have instant access to the complete infusion history of patients.

[redacted] Administration Sets

(a) **(b)** **(c)** **(d)**

Figure 4: **(a) Blue set**; all-in-one administration sets that contain all necessary components such as air eliminator filter, non-return and anti-siphon valve, extension line and reservoir bag, **(b) Yellow set**; designed for easy identification, **(c) Sets with different filter sizes**; developed

for accurate drug delivery in any setting and **(d)** [redacted] **Extension Lines**; completing the [redacted] Administration Sets.

[redacted] Portable Syringe Pumps/ Drivers

(a) **(b)** **(c)** **(d)**

Figure 5: **(a)** [redacted] **Multi Syringe**; suitable for both homecare and hospital treatments for pain management and immunoglobulin therapy, **(b)** [redacted] **20**; a technically advanced syringe driver that incorporates in the field of thalassemia, **(c)** [redacted]; a simple and reliable syringe driver that provides infusion therapy for a wide range of applications and **(d)** [redacted]; a system that can be accompanied on demand by a wide range of therapy specific administration sets.

In recent years, patients and professionals have increased their desire for home infusion therapy. Although the number of studies increased, the results were somewhat variable and there were inherent limitations in determining treatment outcomes due to variances in treatment protocols (duration of therapy, type of drug used, etc.) and patient population. Currently in Malaysia, the home infusion therapy is being practised in private health institutes. The therapy is conducted by a multidisciplinary team of caregivers, nurses, doctors and therapist.[11,12]

Due to lack of clarity surrounding home infusion therapy, as well as the increasing number of institutes that are offering the treatment, this information brief was requested to evaluate whether home infusion therapy can be used as an alternative treatment to inpatients setting in Malaysia.

EVIDENCE SUMMARY

A systematic review was conducted. Review protocol, search strategy and literature search was developed by the main author related to home infusion therapy. The following electronic databases were searched through the Ovid interface: MEDLINE® All <1946 to 13th May 2024. Comparative searches were run in EMBASE, USFDA and INAHTA database while further articles were retrieved from reviewing the bibliographies of retrieved articles. Only articles on humans were included in the review. The most recent search was carried out on 14th May 2024. There were seven studies included which consisted of two systematic reviews and five cohort studies.

EFFECTIVENESS

There were six studies reported on the effectiveness of home infusion therapy. The findings were summarised in Table 1.

A systematic review on the effectiveness of home infusion therapy as a mechanism to improve better health outcomes and lower cost was undertaken by Pollinski JM et al. (2016). A total of 13 studies involving 4,222 patients who received treatment by IV administration. Outpatient antibiotic therapy (OPAT) patients (n=539) were more likely to be "cured" (infection cleared with a negative culture; no additional antibiotic therapy needed) or "improved" (partial

resolution of clinical symptoms and/ or additional antibiotic therapy needed) than inpatient antibiotic therapy (IPAT) patients (86.3%), p<0.001. Furthermore, in a survey of 30 patients using the Cystic Fibrosis Quality of Life Questionnaire (CFQoL), those with cystic fibrosis receiving OPAT reported significant improvements in five domains from baseline to post-therapy follow-up; physical functioning, chest symptoms, emotional response to their disease, interpersonal relationships and career concerns. Meanwhile, patients receiving IPAT reported statistically significant improvements in two domains only; chest symptoms and reduced future concerns.[16, level I]

Giese-Kim N et al. (2020) compared biologic medication use, health outcomes and overall cost of care for adult patients with inflammatory bowel disease (IBD) receiving home versus hospital-based infliximab infusions. **A retrospective cohort analysis** was performed from 2003 to 2016, involving 27,396 IBD patients. Patients receiving home infliximab were more likely to be non-adherent than those getting hospital-based infliximab (22.2% vs. 21.2%, p<0.001). Home infliximab had a higher discontinuation rate compared to hospital infusions (44.7% vs. 33.4%, respectively). Moreover, the home infliximab group had fewer follow-up visits with the primary gastrointestinal provider per year (2.7 ± 5.4 visits, p<0.001) as compared to hospital group.[17, level II-2]

There is a few study of home infusion therapy on geriatric patients. Herein, Shrestha NK et al. (2020) designed **a cohort study** to evaluate the safety of OPAT in nonagenarians. Nonagenarians (age ≥ 90 years) discharged from the hospital on OPAT over a five-years period, from January 2008 to January 2013 were identified. Three matched controls (<90 years) were selected for each nonagenarian. Times to OPAT-related ED visit and OPAT-related readmission were compared across the two groups. The findings showed that being a nonagenarian was not linked with an increased risk of OPAT-related ED visits (hazard ratio [HR] 0.77, 95% CI 0.33 to 1.80; p=0.55) or readmission (HR 0.78, 95% CI 0.28 to 2.16; p=0.63). However, living in a distant county (HR 0.33, 95% CI 0.15 to 0.77; p=0.01) and readmission (HR 0.30, 95% CI 0.11 to 0.87; p=0.03) were linked with a lower risk of an OPAT-related ED visit. In addition, nonagenarians had an increased overall risk of mortality (HR 2.64, 95% CI 1.52 to 4.58; p<0.001) compared to matched controls under 90 years of age. Other factors related to increased mortality included *Clostridium difficile* infection (CDI) during hospitalisation, a higher baseline white blood cell count and a lower baseline platelet count.[18, level II-2]

In another **cohort study** by Concolino D et al. (2017), patients with Fabry disease who had been treated with agalsidase alfa in the home therapy program for a period of at least three months were enrolled in the study. This cohort composed of 45 males (53.0%, mean age: 40.6 years; range 12 to 69 years) and 40 females (47.0%, mean age: 48.8 years; range 17 to 74 years). For the whole cohort, the average duration of home treatment was one year and 11 months. Among the 72 patients, 42 (58.0%) had an increase in EQ-5 Visual Analogue Scale (VAS) score at follow-up compared to baseline (before to initiating home infusions), indicating an improvement in health status or stability. In contrast, 30 patients (42.0%) reported a worsening of their health-related condition. Furthermore, after starting the home therapy programme, 10 out of 74 patients (14.0%) showed a progression of disease, while seven out of 74 patients (9.0%) registered an improvement of clinical status related to Fabry disease by switching from a severe to a moderate class or from a moderate to a mild class according to the Mainz Severity Index (MSSI) (a clinical scoring system developed to assess the severity of signs and symptoms of Fabry disease and to monitor the progress of individual patients during enzyme replacement therapy). However, 57 of 74 patients (77.0%) shown no illness progression and remained stable between the commencement of home therapy and the follow-up.[19, level II-2]

From the environmental perspective, Keller SC et al. (2017) performed **a prospective cohort** study among patients receiving home infusion therapy to identify environmental and other risk

factors for complications. Three hundred and sixty-eight eligible patients who were at least 18 years of age and discharged between March and December 2015 with peripherally inserted central catheters (PICCs) or tunneled CVCs, from two large tertiary-care academic medical centres affiliated with one urban American Medical School; Johns Hopkins Hospital and Johns Hopkins Bayview Medical Center, Baltimore. The study revealed that 52 patients (23.4%) experienced a CVC problem (4.37/1,000 CVC-days). Catheter-associated venous thromboembolism occurred in 0.84/1,000 CVC-days, while central line-associated bloodstream infection occurred at 1.18/1,000 CVC-days. More than a quarter of patients (60 [27.0%]) were readmitted within 30 days of being discharged. Of the readmitted patients, eight (13.3%) had scheduled readmissions, 14 (23.3%) had readmissions due to CVC complications, and ten (16.7%) were OPAT patients with deteriorating infections. Environmental exposures such as the person conducting the infusion, pets, well water and cooking with raw meats were not connected with readmissions. However, soil contact (via gardening or yard labour) was related with a lower chance of readmission (Odd Ratio [OR] 0.15, 95% CI 0.03 to 0.69; adjusted OR 0.09 95% CI 0.01 to 0.74).[20, level II-2]

Rentala M et al. (2016) conducted **a retrospective cohort study** to evaluate whether patients with cellulitis at Long Island Jewish Medical Center can be safely discharged from a 24-hour clinical decision unit (CDU) with home infusion of IV antibiotics. After the patient was discharged from the CDU, a Region Care nurse attended at their house with further antibiotic doses (typically on the same day). Of the 32 patients receiving home infusion therapy, 20 (62.5%) were female and 12 were male (median age: 46.5 years). Home infusion therapy was shown to be effective in treating 31 (96.9%) of the 32 individuals with cellulitis. The average duration of IV antibiotics for patients undergoing this therapy was 3.4 days. One patient was admitted to the hospital from home because he was not improving clinically and he was eventually discharged on oral antibiotics within two days.[21, level II-2]

Ruh CA et al. (2015) conducted **a retrospective cohort study** to determine the efficacy and adverse drug event complications of a home IV antibiotic infusion programme in a Veterans Affairs facility. The chart review was undertaken between April 2011 and July 2013. To determine success, all patients were tracked for six weeks after they stopped taking antibiotics. Clinical failures were defined as readmission or death due to worsening infection, or readmission as a result of an adverse event related to antibiotic treatment. Of the total episodes reviewed, the result presented 17 (17.7%) failed therapy, while 79 (82.3%) were deemed successful.[22, level II-2]

Subedi S et al. (2014) in **a cohort study** also assessed OPAT since it has been used as a standard of care in most Australian hospitals to treat a variety of infections. In 2011, 150 OPAT episodes were treated by Alternate Site Infusion Service (ASIS) in 144 patients (to treat infections in bone and joint, endocarditis, skin and soft tissue, surgical site, blood stream, central nervous system, intra-abdominal and IV cathethers); median age 55 years [range 16 to 90 years]). During the 12-month period, 466 home visits were made for 84 patients. Sixty-six patients did not require home visits during their OPAT care. The total number of inpatient bed-days saved by administration of IV antibiotics outside the hospital was 3,520. The overall cure rate in the study was 93.0%. The ASIS-related readmissions occurred in nine patients within 28 days of cessation of IV antimicrobials. Moreover, patients with two or more comorbidities had an increased risk of failure (OR 2.15, 95% CI 1.28 to 3.65; p=0.004).[23, level II-2]

Table 1: Effectiveness of home infusion therapy for outpatient setting.

Study	*Patient characteristic/ disease*	*Study duration*	*Intervention*		*Findings*
			Treatment	**Control**	
Polinski JM et al./2016/ SR[16, level I]	N=4,222 Patient received treatment (administered by using IV)	Around 4 months	HIT (different drugs)	Clinical setting	• Among OPAT patients, 94.6% (509/539) cured and improved compared to 86.3% (465/539) of IPAT patients, p<0.001. • The CFQoL showed significant improvements of OPAT patients from baseline to post-therapy follow-up in five domains: physical functioning, chest symptoms, emotional response, interpersonal relationships and career concerns.
Giese-Kim N et al./2020/ Cohort[17], level II-2	N=27,396 Patients with inflammatory bowel diseases	200 days	HIT (infliximab)	Hospital setting	• Lower adherence was shown in HIT as compared to hospital-based (22.2% vs. 21.2%, p<0.001). • Higher discontinuation was shown in HIT as compared to hospital-based (44.7% vs. 33.4%, p<0.001). • HIT group had the fewest follow-up visits with the primary gastrointestinal provider per year (2.7 ± 5.4 visits, p<0.001).
Shrestha NK et al./2020/ Cohort[18], level II-2	N=497 Nonagenarians > 90 years old (123), younger patients or control (374)	5 years	HIT	None	• Residence in a distant country was associated with decreased hazard of OPAT-related emergency department visit (HR 0.33, 95% CI 0.15 to 0.77; p=0.01) and readmission (HR 0.30, 95% CI 0.11 to 0.87; p=0.03). • Nonagenarians had a higher hazard of death overall (HR 2.64, 95% CI 1.52 to 4.58; p<0.001) compared with controls. • Other variables associated with increased mortality were CDI during the hospitalisation, higher baseline WBC count, and lower baseline platelet count.
Concolino D et al./2017/ Cohort[19], level II-2	N=85 Fabry disease	23 months	HIT (agalsidase alfa)	None	• 58.0% (42/72) showed an increase of EQ-5 VAS score at follow up compared to baseline (before starting home infusions). • 14.0% (10/74) showed a progression of disease, while 9.0% (7/74) registered an improvement of clinical status related to Fabry disease by switching from a severe to a moderate class or from a moderate to a mild class according to MSSI. 77.0% (57/74) showed

					no progression of disease and remained stable between starting home therapy and follow up.
Keller SC et al./2017/ Cohort[20], level II-2	N=222 Patients with central venous catheters	30 days	HIT (antimicrobial therapy)	None	• 27.0% (60/222) were readmitted within 30 days of hospital discharge; 23.3% (14/60) had readmissions related to a CVC complication, and 16.7% (10/60) were outpatient parenteral antimicrobial therapy patients with worsening infections. • Soil exposure (through gardening or yard work) was associated with a decreased likelihood of readmission (OR 0.15, 95% CI 0.03 to 0.69); adjusted OR 0.09, 95% CI 0.01 to 0.74.
Rentala M et al./2016/ Cohort[21], level II-2	N=32 Patients with cellulitis	None	HIT (antibiotics)	None	• Eliminated the infection in 96.9% (31/32) patients.
Ruh CA et al./2015/ Cohort[22], level II-2	N=85 Patients treated with antibiotics	6 weeks	HIT (antibiotics)	None	• Among discrete episodes of OPAT, 17.7% (17/96) failed therapy whereas 82.3% (79/96) were considered a success.
Subedi S et al./2014/ Cohort[23], level II-2	N=144 Patients with self-administered programme	4 to 106 days	HIT (antibiotics)	None	• The total number of inpatient bed-days saved by administration of IV antibiotics outside the hospital was 3520. • The overall cure rate was 93.0% (133/144). ASIS-related readmissions occurred in nine patients within 28 days of cessation of IV antimicrobials. • Patients with two or more comorbidities had an increased risk of failure (OR 2.15, 95% CI 1.28 to 3.65; p=0.004).

SR, systematic review; IV, intravenous; HIT, home infusion therapy; OPAT, outpatient antibiotic therapy; IPAT, inpatient antibiotic therapy; CFQoL, Cystic Fibrosis Quality of Life; HR, hazard ratio; CI, confidence interval; CDI, Clostridioides difficile infection; WBC, white blood cell; VAS, visual analogue scale; Mainz Severity Score Index; CVC, central venous catheter, OR, odd ratio; ASIS, Alternate Site Infusion Service; IBD, inflammatory bowel disease; ED, emergency department

SAFETY

Among the complications related to home infusion therapy were vascular access issue, haemorrhagic bleeding, allergy reaction to drug and readmission to hospitals. Several adverse events related to the therapy were also reported such as *Clostridioides difficile* infection, cutaneous rash and events secondary to the antimicrobials (pancreatitis due to tigecycline, endocarditis, acute kidney injury, worsening infection, development of resistant isolate, hypokalemia and development of hives). However, none of the above complications and adverse events were life-threatening and had been reported to be manageable.[16,18,19,21-23]

With the increasing evidence and usage of home infusion therapy, the United States of Food and Drug Administration (USFDA) provides a useful resource for planning care, including specific issues related to the use of medical devices, such as infusion pumps in the home environment.[24-26] This indicates that it is already considered by the agency to allow safe practise among patients and healthcare workers.

ECONOMIC IMPLICATION

There were four studies reporting on the economic implication of home infusion therapy for outpatient setting.

Table 2 outlined the summary of cost comparison between home and inpatient infusion, in a study that was conducted by Haines D (2023). The review was to provide a critical evaluation of the current evidence of the cost savings associated with home infusion therapy when compared to inpatient therapy.[27]

Table 2: Home and inpatient infusion cost comparison.[27]

Year	***Therapy and study type***	***Site comparison***	***Results***
1988	Anti-infective retrospective chart and billing review	Inpatient vs. home infusion	Home infusion mean total cost savings per patient = $40,460.
1998	Anti-infective cost model to determine a Medicare 5-year cost savings if home infusion coverage was implemented	None	The model shows cumulative five-year savings of nearly $1.5 billion.
2000	Anti-infective retrospective chart review of home infusion patients vs. theoretical cost of inpatient	Inpatient vs. home infusion	Home infusion mean cost per day = $122. Inpatient mean cost per day = $798.
2004	Inotrope comparative cost study (patients awaiting transplantation)	Inpatient vs. home infusion	Outpatient strategy saved a total of $71,300 to $120,500 per patient.
2015	Anti-infective retrospective chart review	Inpatient vs. rehab care vs. home infusion	Mean total cost saving for home infusion patients was $81,559 when compared to inpatient cost.
2017	Enzyme replacement retrospective chart review	Inpatient vs. home infusion	There was a significant difference ($p \leq 0.0001$) in cost between inpatient and home infusion. Home infusion mean cost per day = $225.10, hospital mean cost per day = $586.50.

Adapted from Haines D. Cost Savings: Home versus Inpatient Infusion Therapy, A Review of the Literature. Infusion Journal. 2023; 2(3): 3-7.

More evidence was retrieved from other three studies, as follows:

- A study in Australia used a self-controlled design to compare 20 patients' OPAT costs to the IPAT costs associated with their admission diagnoses immediately prior to their discharge to the OPAT program. On average, OPAT expenditures totaled $147 ± $57 per day versus $259 ± $76 per day for IPAT. The mean cost savings associated with a full coarse of OPAT versus of IPAT was $2,974 ± $2,806.[16, level I]

- In a study conducted in United States-based among patients with cystic fibrosis, those randomised to OPAT had mean costs of $15 ± $14 per day compared to $24 ± $18 per day among patients randomised to IPAT. The hospital's average total treatment costs to achieve a cure were: OPAT (3 IPAT days + 10 OPAT days) = $2,476, compared with IPAT = $5,028 (11.4 days of IPAT), a savings of $2,552 per patient.[16, level I]

- The costs of home versus inpatient infusion in France were compared in a randomised controlled cross over trial, in which 42 patients were randomised to receive two home infusions followed by two inpatient infusions or vice versa. Even though the costs of the infused chemotherapy drugs delivered at home ($137) were nearly twice those in the hospital ($74), the average costs per chemotherapy home infusion ($253 ± $82) were significantly less than in hospital ($277 ± $62), p=0.0002, because the indirect costs associated with inpatient stays were so much higher than those associated with home infusion.[16, level I]

- A study in Singapore compared costs between OPAT patients and IPAT patients, matched by age, gender and diagnosis. The IPAT patients were selected from the 12-months prior to OPAT's availability in Singapore. The average treatment duration was 24.3 days for OPAT patients compared with 19 days for IPAT patients. Mean costs per day were $278 for OPAT and $457 for IPAT, p<0.001. Even though the treatment duration was longer, each OPAT course of treatment saved approximately $1,928 when compared with an IPAT treatment course.[16, level I]

- Another study was conducted in United States. The total paid claims per patient per year was recorded. The home infliximab group had lower total costs than patients receiving hospital-based infusions ($49,149 vs. $51,170; p<0.001). The proportion of patients with more than $500 a year of out-of-pocket costs were similar between the home and hospital infliximab groups (2.6% vs. 2.3%).[17, level II-2]

CONCLUSION

A substantial quantity of retrievable evidence indicates that home infusion therapy is a safe and well-tolerated modes of treatment. This technique has potential on minor improvements in health status and cure, and aids in infection elimination. Younger patients and those with fewer comorbidities appear to benefit the most from home infusion therapy. No life-threatening adverse events were reported and all complications were successfully managed. In terms of economics, most studies indicated that home infusion therapy is cost-saving due to reduce in administration cost, staffing and earlier recovery.

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5 June 2024