Sir Charles Gairdner Hospital

Assisted Automated Peritoneal Dialysis
A pilot program in Australia

Debbie Fortnum, Narelle Hawkins, Gerrie Vandepeer
Dr. Aron Chakera

MAGNET RECOGNIZED
AMERICAN NURSES CREDENTIALING CENTER

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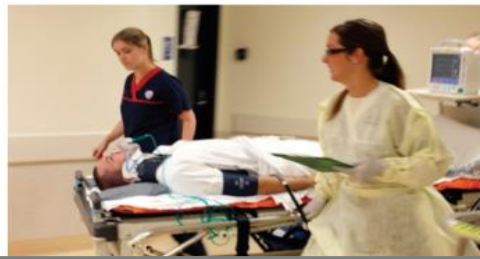


Exceptional care from dedicated people - we put patients first

Content

The story of a pilot program for AAPD

“Working outside the square to meet the needs of PD patients and their carers”

Background

- In 2014, 16% Australian patients stopped PD due to personal reasons including inability to self-care (ANZDATA, 2015)
- Internationally, including UK & Europe AAPD is highly successful (N. Brown & Vardhan, 2011; Li, 2008; Lyasere et al., 2016; Querido et al., 2015)
- In France registry data has demonstrated that 56% of patients >70 years were unable to perform their own treatment but with assistance 86% successfully did AAPD (Lobbedez et al., 2006; Verger et al., 2006)
- In Toronto, AAPD highly valued by patients and staff (Oliver & Quinn, 2009)
- AAPD is cost effective (Franco et al., 2012; Health Policy Analysis, 2009)(Laplante et al., 2015)

Background – When to use AAPD

- A bridge therapy during an acute illness or for those who are waiting to train for PD
  (Povlsen & Ivarsen, 2007)
- Permanent care to avert PD technique failure and a forced switch to in-centre HD
  (E. Brown & Wilkie, 2016)
- Assistance to carers who need respite
  (E. Brown & Wilkie, 2016; N. Brown & Vardhan, 2011; Povlsen & Ivarsen)
- Ongoing training or mentoring where some patients eventually graduate to self-care PD
  (Oliver and Quinn 2009)

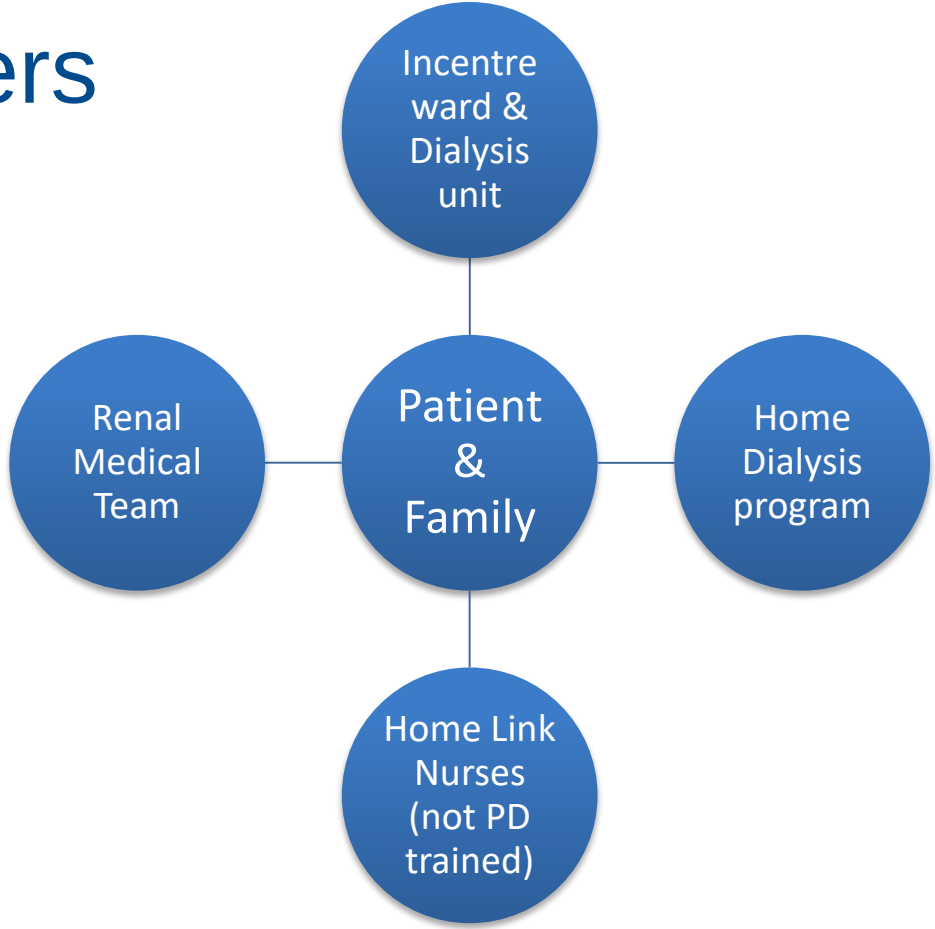
Demand for service SCGH

2012,
100 avoidable bed days PD

1200 per day
=
$120 000

- Acute illness
- Needing urgent dialysis & yet to train
- Carer respite

Stakeholders



Staff logistics – Training commenced Jan 2015

- Lectures general renal information
- Self directed learning package
- Fresenius trainer for specific machine training
  (I week of 2 hours sessions - 31 of 40 staff attended)
- **Mentoring program with two nurses for at least two visits**
- **Step by step guides provided in the home**

Home Link admission and attendance documents developed specific to AAPD

Home Visit – role of home link nurse

- Check UF colour and volume
- Strip down machine and check alarms
- Patient assessment
- Decision re appropriate prescription – in consultation
- Set up machine (use sleep-safe set ultra and push first pin in)
- PATIENT DID OWN CONNECTION

Stakeholder - target population

Group
Current self-care APD patients who are **in-patients or attending emergency department**
Current patients whose APD is usually **performed by a carer** who is now unavailable
Patients with functioning catheter, need dialysis but **not yet trained**
Eligibility criteria as per usual PD programme except self-care Had to be able to connect and disconnect (or willing to learn)

Aim of research / pilot study

- To determine the feasibility of AAPD in WA
- To determine user demographics, clinical outcomes and patient perceptions
- To identify the staff training requirements and staff perceptions
- To cost AAPD compared to alternative modalities of PD in hospital or in-centre HD

Step 2: Research (pilot study)

Research topic/subjects	Relevant details
Current perceptions of dialysis survey	Paper-based multi-choice survey
Patient quality of life	KDQOL-36
Clinical outcomes	Charlson Comorbidity Index Medical Notes review
Staff perceptions	Online survey / Stakeholder interview
Staff phone support	Recorded data for 63 phone calls
Patient satisfaction	Phone interview, 18 questions
Costs and saving	Cost-minimisation analysis
Ethics	Funded by a SHRAC grant and ethics approved

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AAPD patient data
Demographics, perceptions and case histories



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AAPD participants (Oct 15- Jan 17)
15% of SCGH, PD cohort

Reason for referral		Treatments
Pre-dialysis	5 (28%).	Range 6-11
Acute injury/illness (usually self-care)	10 (56%)	Range 1-167 Mean 42.5
Respite (carer)	3 (17%)	
Total	18 patients	553 treatments
Outcomes		
Death	2 (11%)	Both high comorbidity scores and cardiac
Started training	5 (28%)	
Transfer to HD	2 (11%)	Both peritonitis, one frail, one

#1: Male, 51 year old
New PD catheter

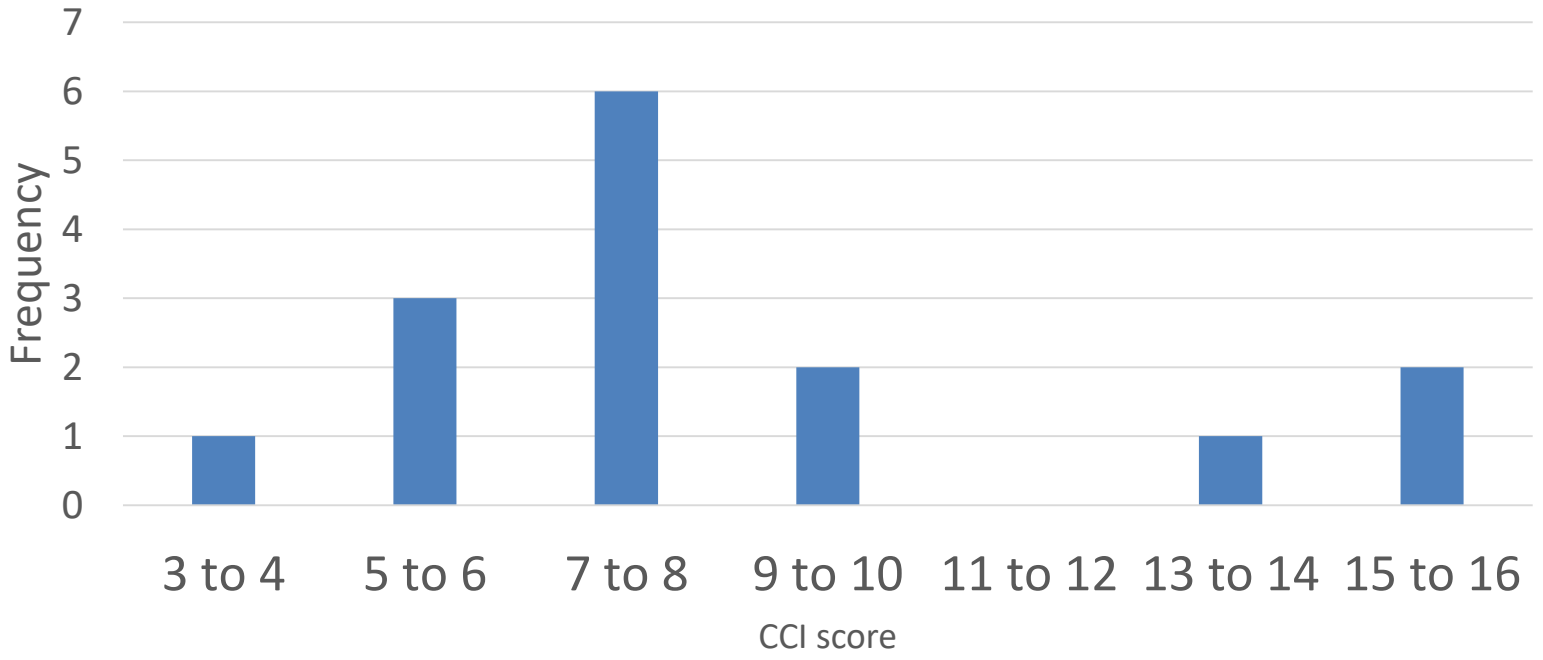
- Needed PD urgently for uraemia. Started APD in hospital
- Training date set 2 weeks
- Learnt connect and disconnect in hospital
- Discharged on AAPD with support of wife
- Commenced training after 8 sessions AAPD
- Very satisfied with service

#2 Female, 72 years
Respite for daughter - full time carer

- Daughter unable to manage PD. Patient unable to do HD.
- Required full strip down and set up of machine
- Very thankful and allowed close monitoring as health became more frail
- LOS 167 days
- Acute MI – RIP
- Family very grateful

Charlson Comorbidity Index scores

Age Adjusted (mean 8.7 - SD 3.7)



These scores were high compared to the average dialysis population indicating their frailty and need for AAPD

Mean age 68 years

Patient perceptions of AAPD and nursing support

- 10 patients
- 1 patient had used service twice for different reasons so two surveys completed
- Multi-choice question
- Phone interviews

Experience of the Patients

Comments:

"Some nurses better than others" "All good, nurses fabulous"

"Continuity of nurses would be good. Regulars get to know you"

"Nurses involved entire household"

Patient: "Would like assisted APD long-term or at least respite"

Carer: "Should be made more available for casual times"

New patients: "Had a week on PD in hospital so slowly learnt to connect and disconnect"

"Difficult at first"

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Home Link
staff perceptions

Home Link Nurse Survey

- Aim to determine satisfaction and whether training and support systems adequate
- 22 question survey - input from key stakeholders
- Feb 2017, administered via survey monkey to all 40 Home link nurses

- 16 responded (40%)
- 75% of nurses had over 11 years nursing experience
- Only 12.5% had moderate experience of PD

Change in competence

- Competency levels started low with nurses feeling just competent at the beginning
- At the end staff (37.5%) that continued to feel inadequately skilled had all delivered less than 5 episodes of care

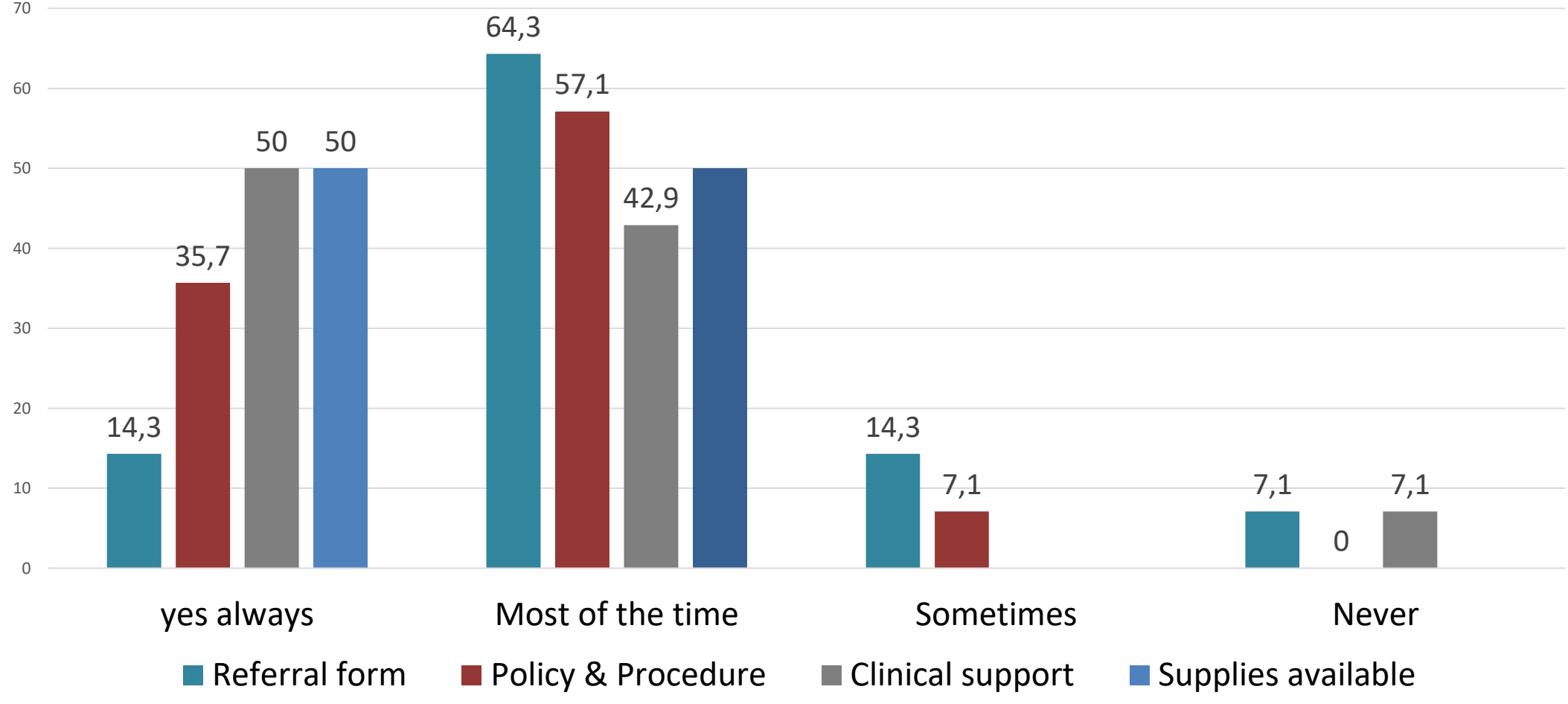
Competence specifically increased in those delivering at least 5 episodes of care	**p<0.0001**
Delivering over 20 episodes led to reasonable or complete confidence	p<0.0001
Satisfaction with delivery of programme was strongly associated with competence level	p<0.001

Clinical Support / Incidents

- 64 documented need for expert support
- 48 prescription related
- 10 direct dialysis issues (5 resulted in missed night of dialysis)
- 4 miscellaneous

- 14 non–renal incidents

Did the practical aspects for care delivery and support meet your needs?



Stakeholder suggestions to improve

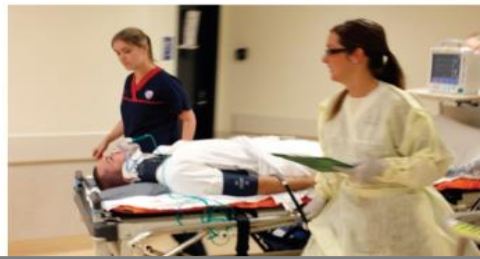
Staff training went well but need more time. Definitely need retraining annually. (FMC & Home Link)

Would like a training manual – one stop shop with information re AAPD project (Ward)

There is a demand and it definitely needs to continue for both short-term and long-term patients. Also needed across Perth (All)

System excellent for carer respite but has gaps for new patient- on-call particularly. Need system put in place to introduce them to usual on-call experts (All)

Costs and savings
Cost minimisation exercise



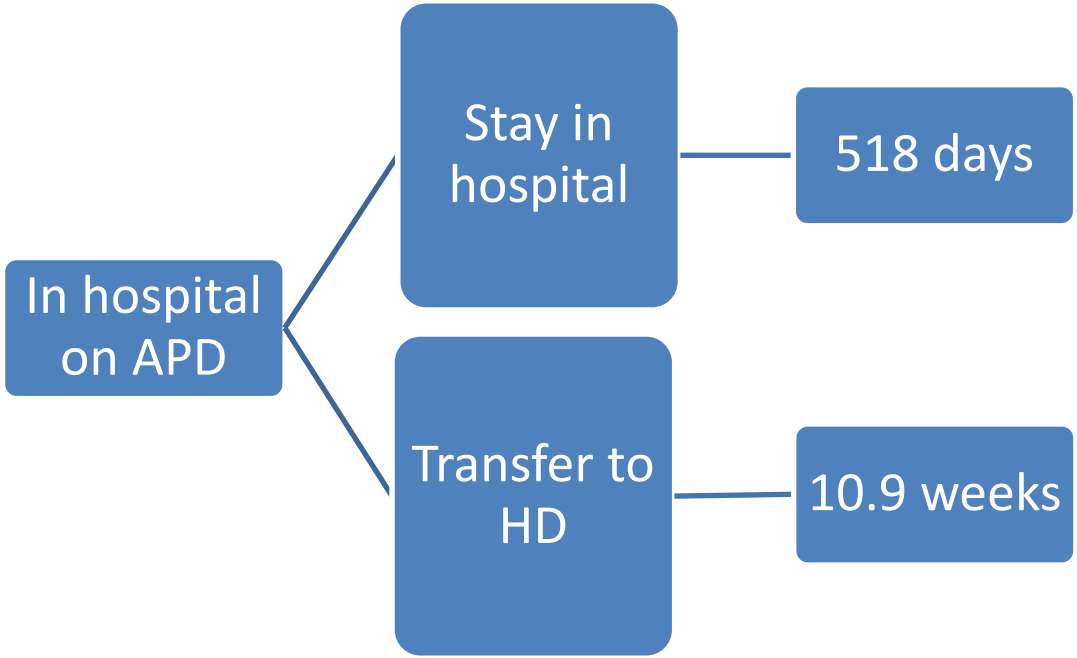
Cost for each therapy per week

$8484

$3381

$2947

Savings



Saved 74 weeks in hospital

Saved 11 weeks hospital HD

Used 85 weeks AAPD
(reclaimed $275 each Tx)

Estimated savings over $550,000

Next steps

- Program continues
- Additional training resources including video developed
- Permanent funding still to be secured
- Hope to expand as a permanent chronic service across WA

Conclusion

- AAPD is a patient centred model of care
- AAPD can be successfully delivered by non-PD expert but expert clinical support remains critical
- Nurse exposure improves competence
- It is easier for existing patients to manage AAPD than new patients
- AAPD is cheaper then hospital HD or Hospital PD
- There is always room to improve any model of care

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