

Accreditation of Dialysis Units: the Australian Perspective

Associate Professor Josephine Chow

*Area Clinical Manager, Cardiovascular Stream
Co-Director, Renal Clinical Research Centre
Sydney South West Area Health Service*

**SYDNEY SOUTH WEST
AREA HEALTH SERVICE
NSW HEALTH**

*School of Nursing
The University of Sydney*



*School of Nursing
The University of Tasmania*







Objectives

- Describe the management approaches in the issues of infective disease in Australia
- Introduce the Australia Council of Health Care Standards (ACHS) accreditation and its review process/cycles
- Introduce a quality improvement project
- Outline the national clinical indicators reporting and benchmarking on dialysis blood stream infection



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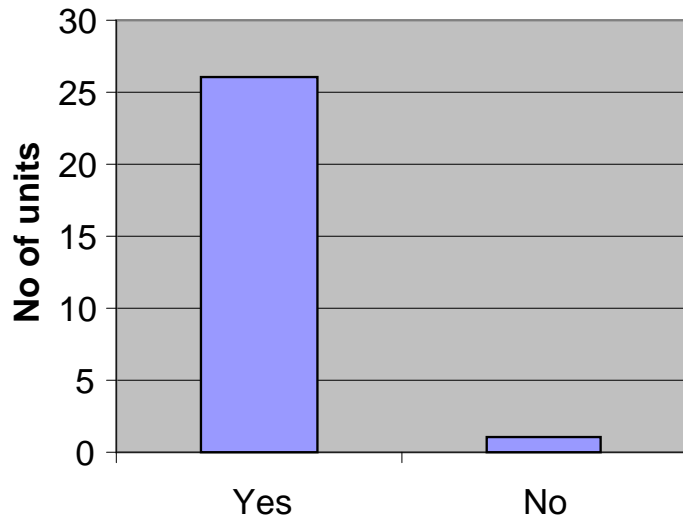
Survey on dialysis units on the management of HBV, HCV, HIV, MRSA & VRE



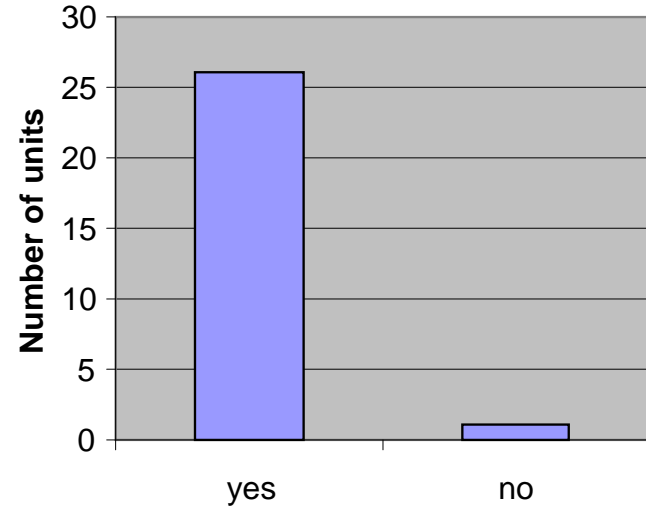
Does screening make it safe?



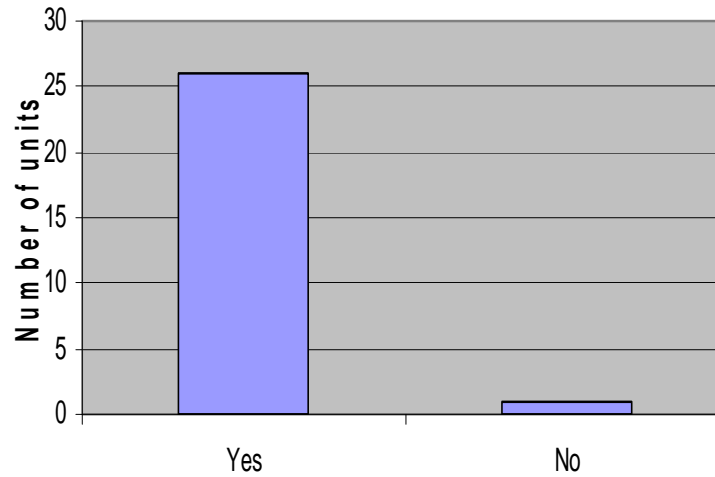
Hep B screening



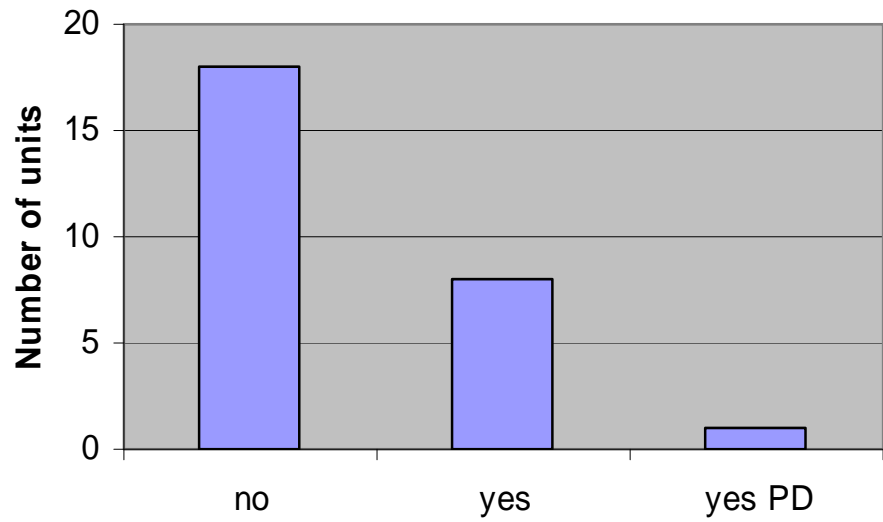
Hep C screening



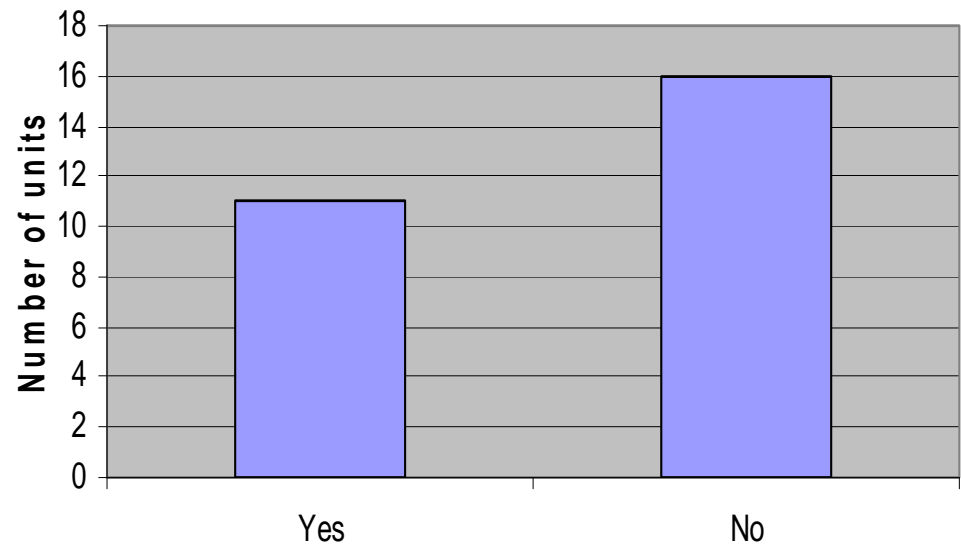
HIV Screening



MRSA Screening



VRE screening



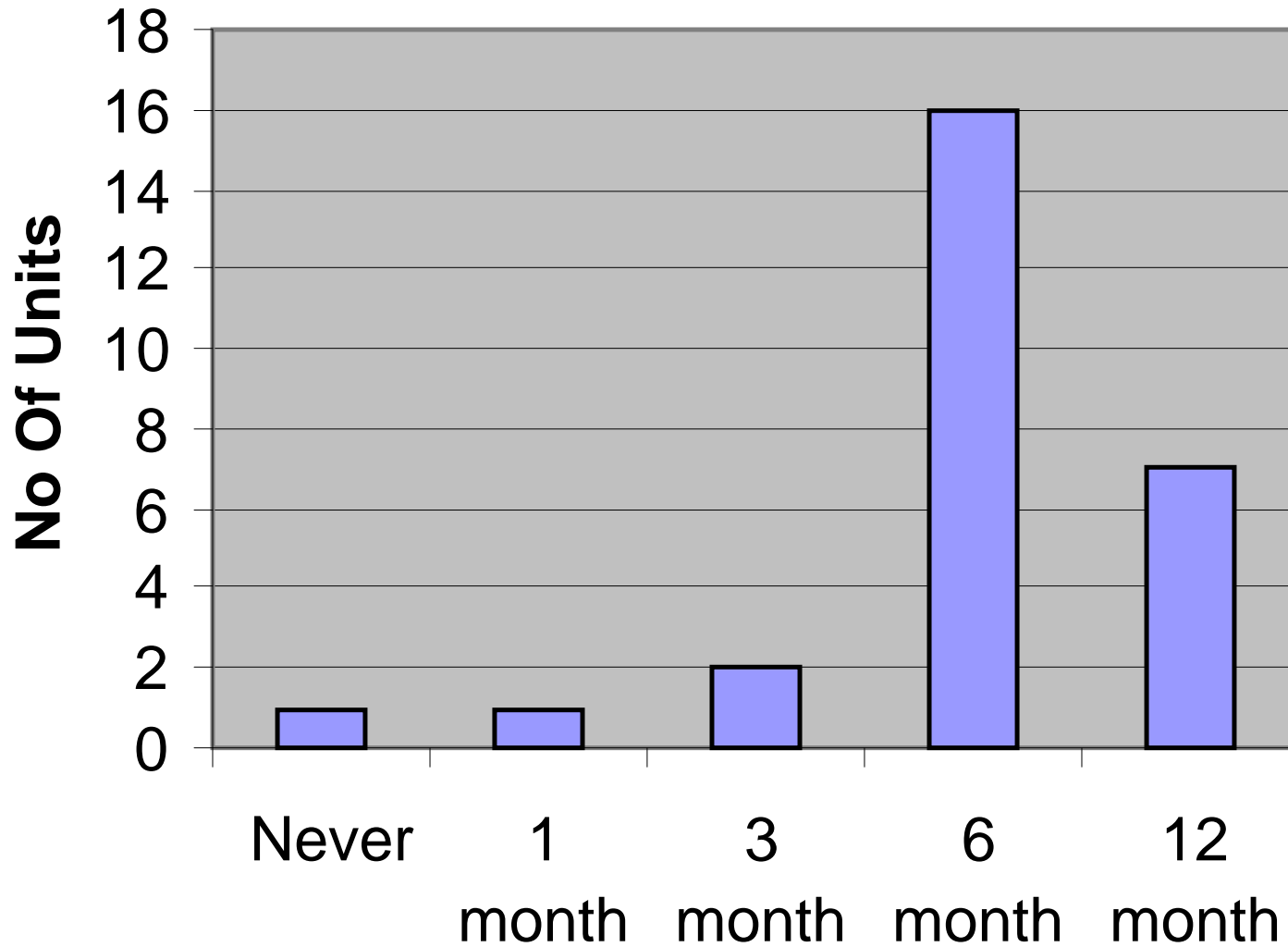


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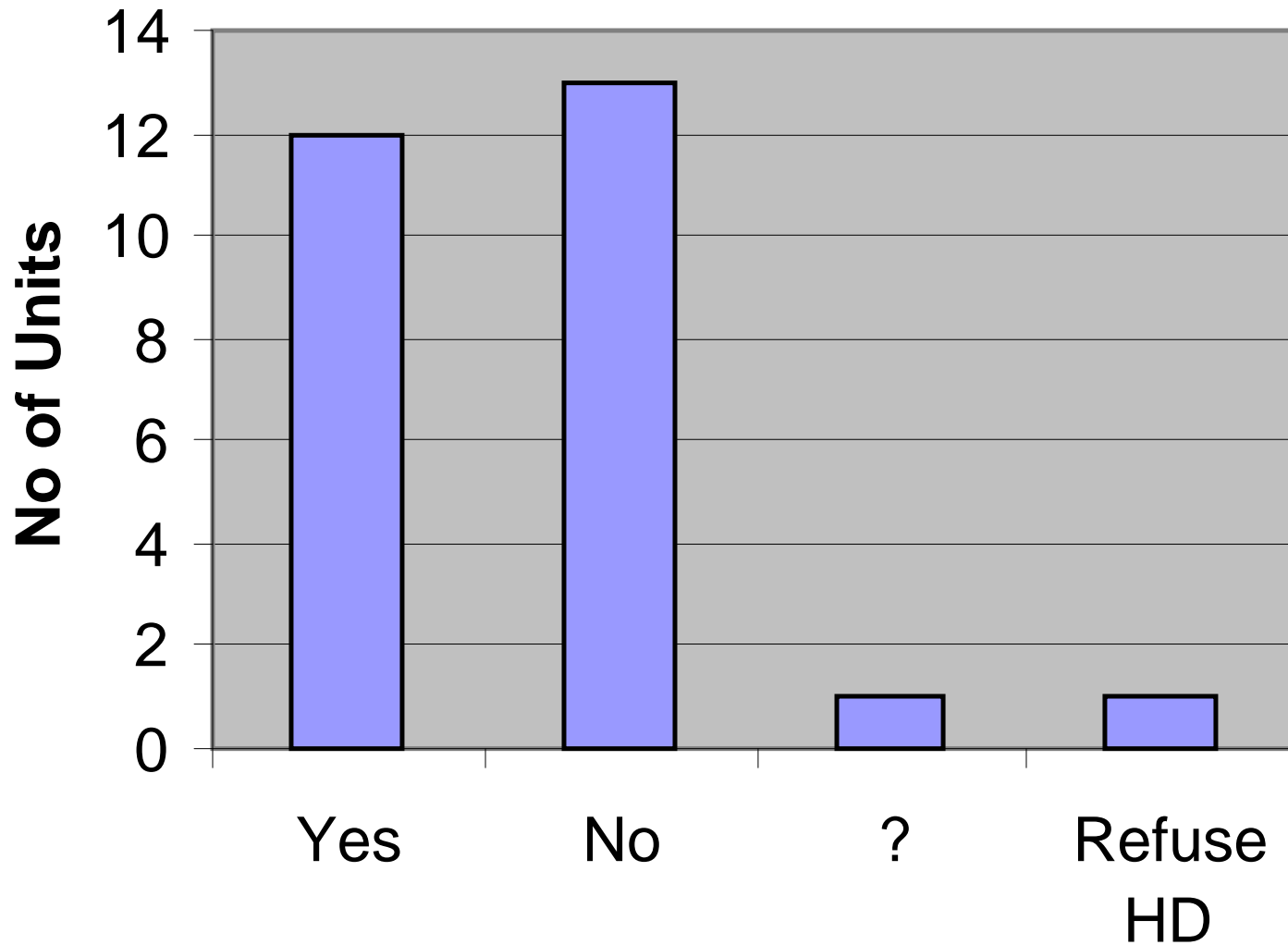
What are the pathology costs (\$ in HK currency)

- HBV \$244.80
- HCV \$ 94.50
- HIV Free
- MRSA swab \$150.00
- VRE swab \$288.00

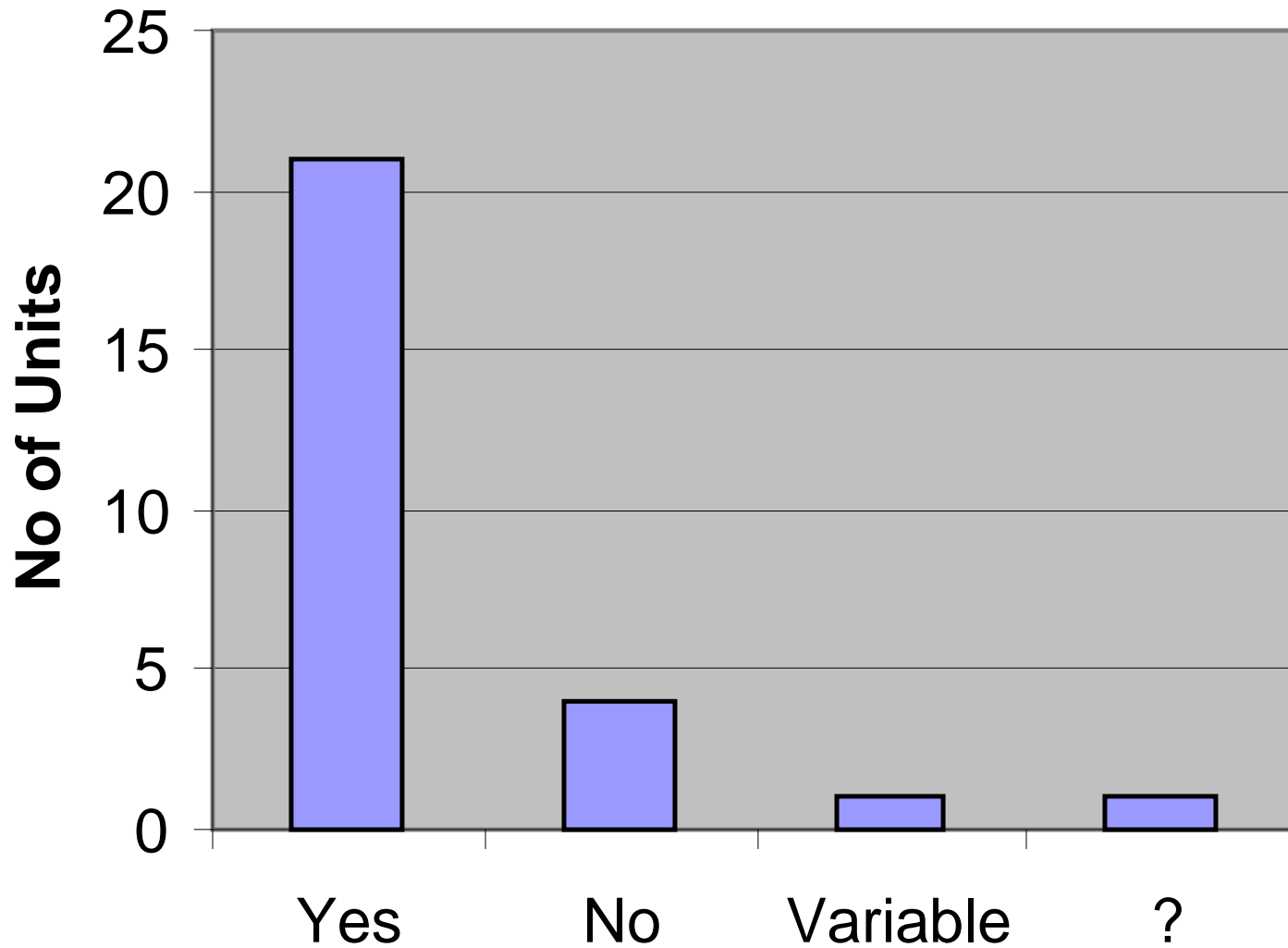
Frequency of HBV testing



Isolation HBV



Acceptance for Holiday HD





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Summary of Policies (HBV)

	Latest Version	Screening	Frequency of screening	Vaccination for Patient	Vaccination for Staff	Isolation
NSW Health Infection Control Policy	2007	Yes	Not mention	Yes	Yes	Separation of patients by room or area and use of a dedicated machine is recommended
Victoria Health Infection Prevention Program	2006	Yes	Not mention	Yes	Yes	Not mention
Australia & New Zealand Society of Nephrology, DNT" Sub-Committee "Consensus Statement"	2001	Yes	3-6 monthly	yes	Not mention	Use of separate rooms and dedicated machines is recommended
Sydney South West Area Health Service (Western Zone)	2007	Yes	6 monthly	yes	Yes	Use of single room and dedicated machine

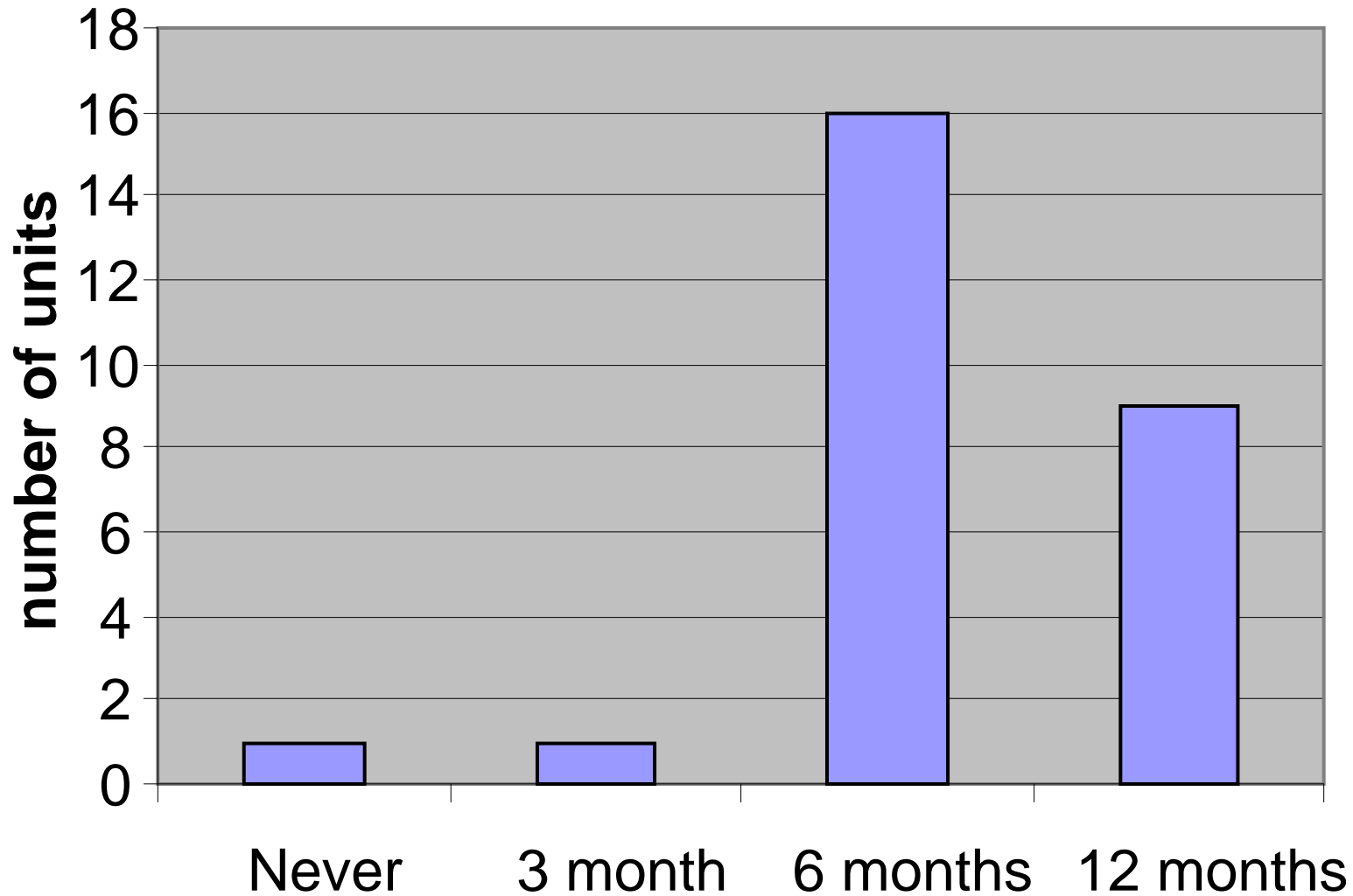


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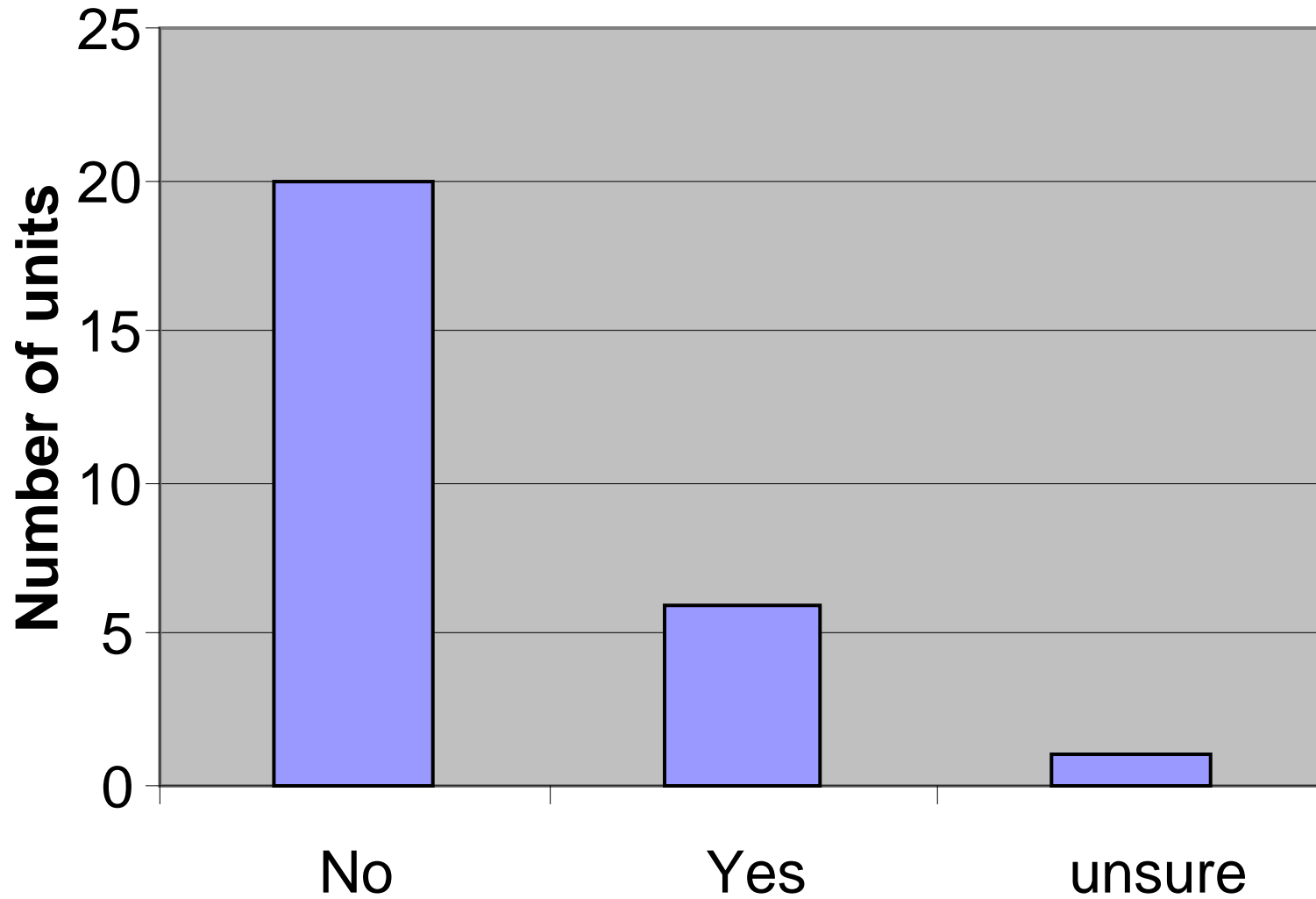
HCV ANZDATA

- New Zealand
- Incidence = 1%
- Prevalence Dialysis = 1.5%
- Prevalence Transplant = 1.4%
- Australia
- Incidence = 2%
- Prevalence Dialysis = 2.5%
- Prevalence Transplant = 2.5%

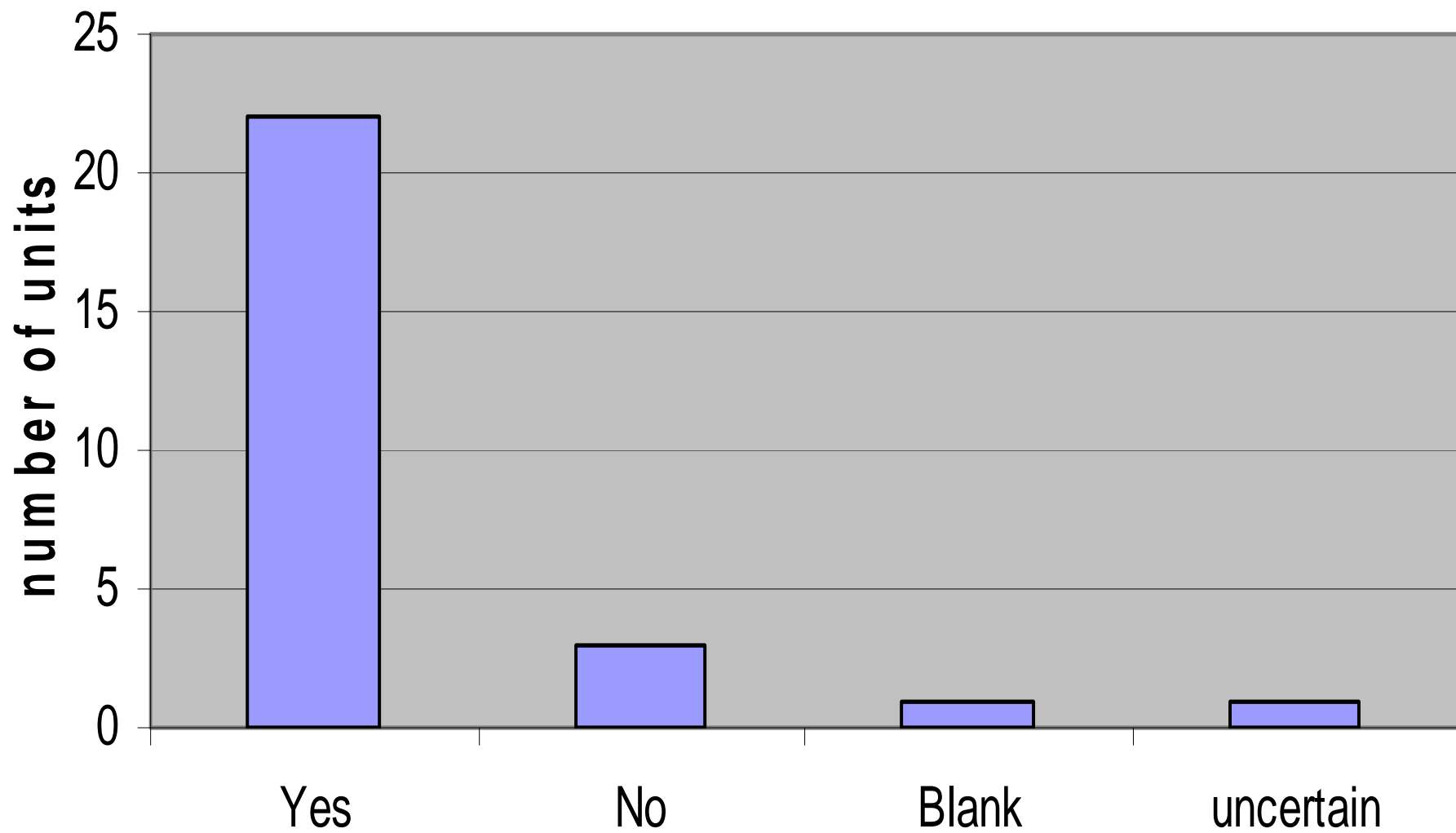
Frequency HCV testing



HCV isolation



Hep C holiday acceptance



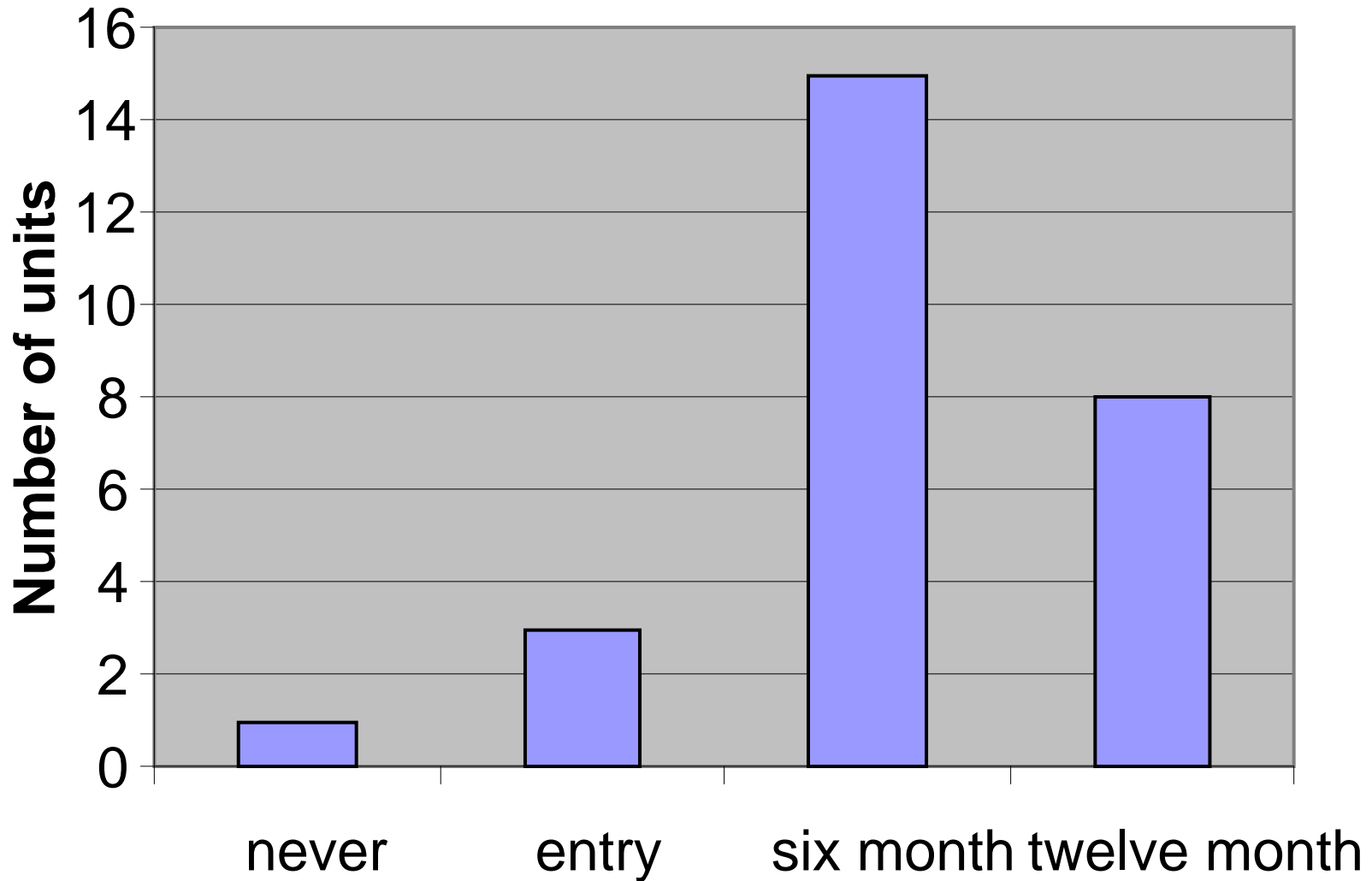


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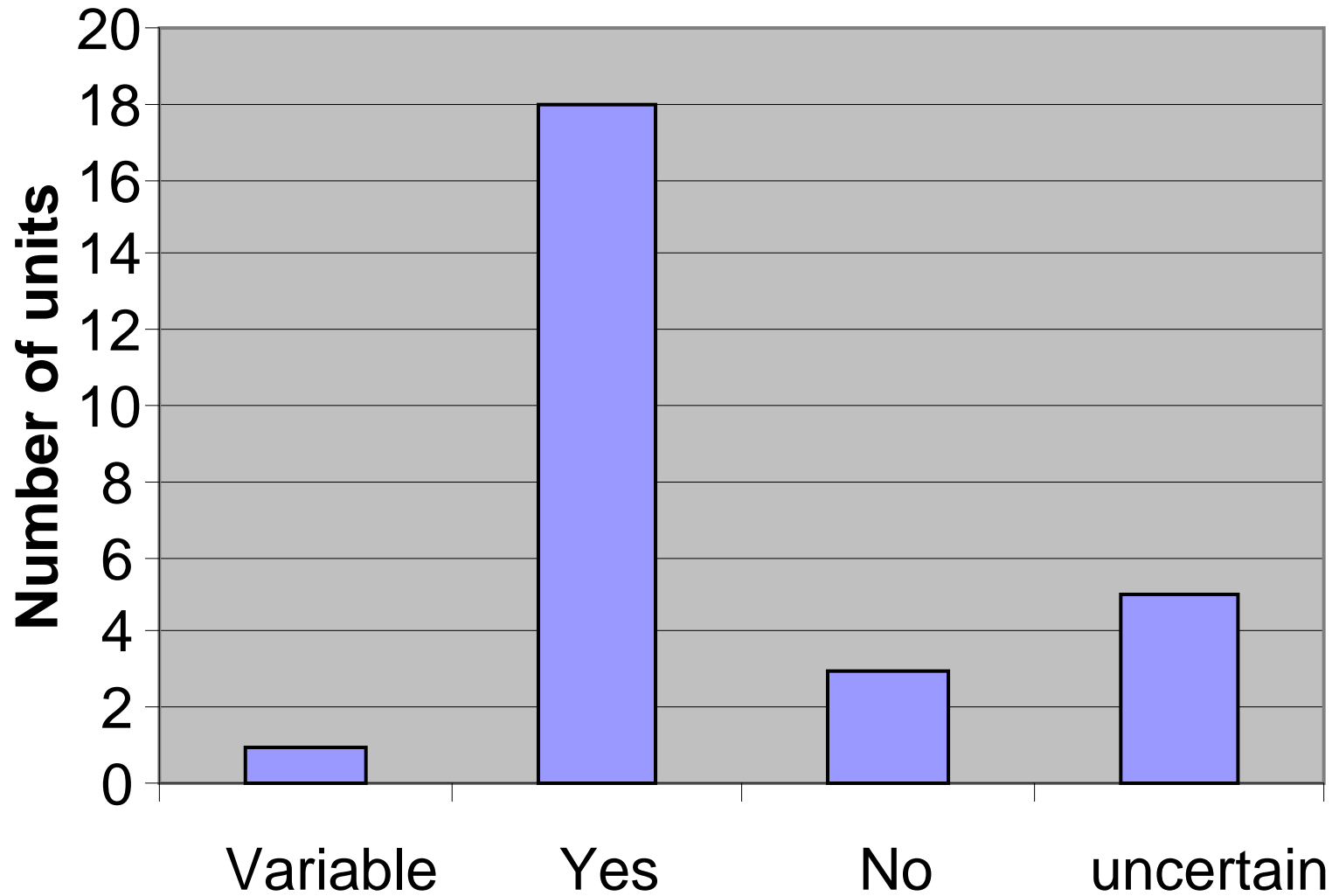
Summary of Policies (HCV)

	Latest Version	Screening	Frequency of screening	Vaccination for Patient	Vaccination for Staff	Isolation
NSW Health Infection Control Policy	2007	Yes	Not mention	Vaccine not available	Vaccine not available	There is insufficient evidence to justify routine use of dedicated machines for dialysis or isolation of patients
Victoria Health Infection Prevention Program	2006	Yes	Not mention	Vaccine not available	Vaccine not available	Not mention
Australia & New Zealand Society of Nephrology, DNT" Sub-Committee "Consensus Statement"	2001	Yes	3-6 monthly	Vaccine not available	Vaccine not available	Isolation should be considered
Sydney South West Area Health Service (Western Zone)	2007	Yes	6 monthly	Vaccine not available	Vaccine not available	Use of single room and dedicated machine

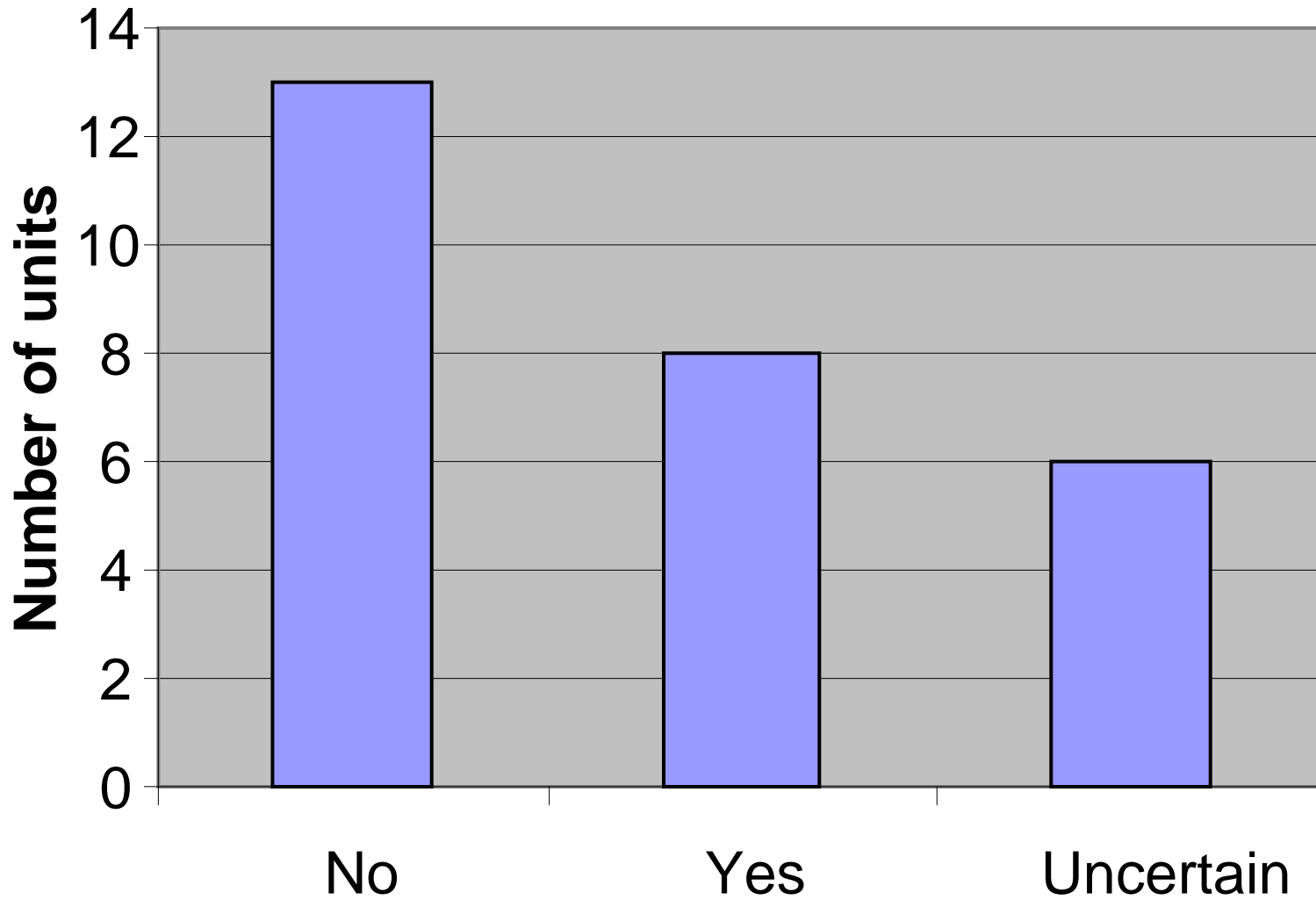
Frequency of HIV testing



HIV holiday acceptance



HIV Isolation



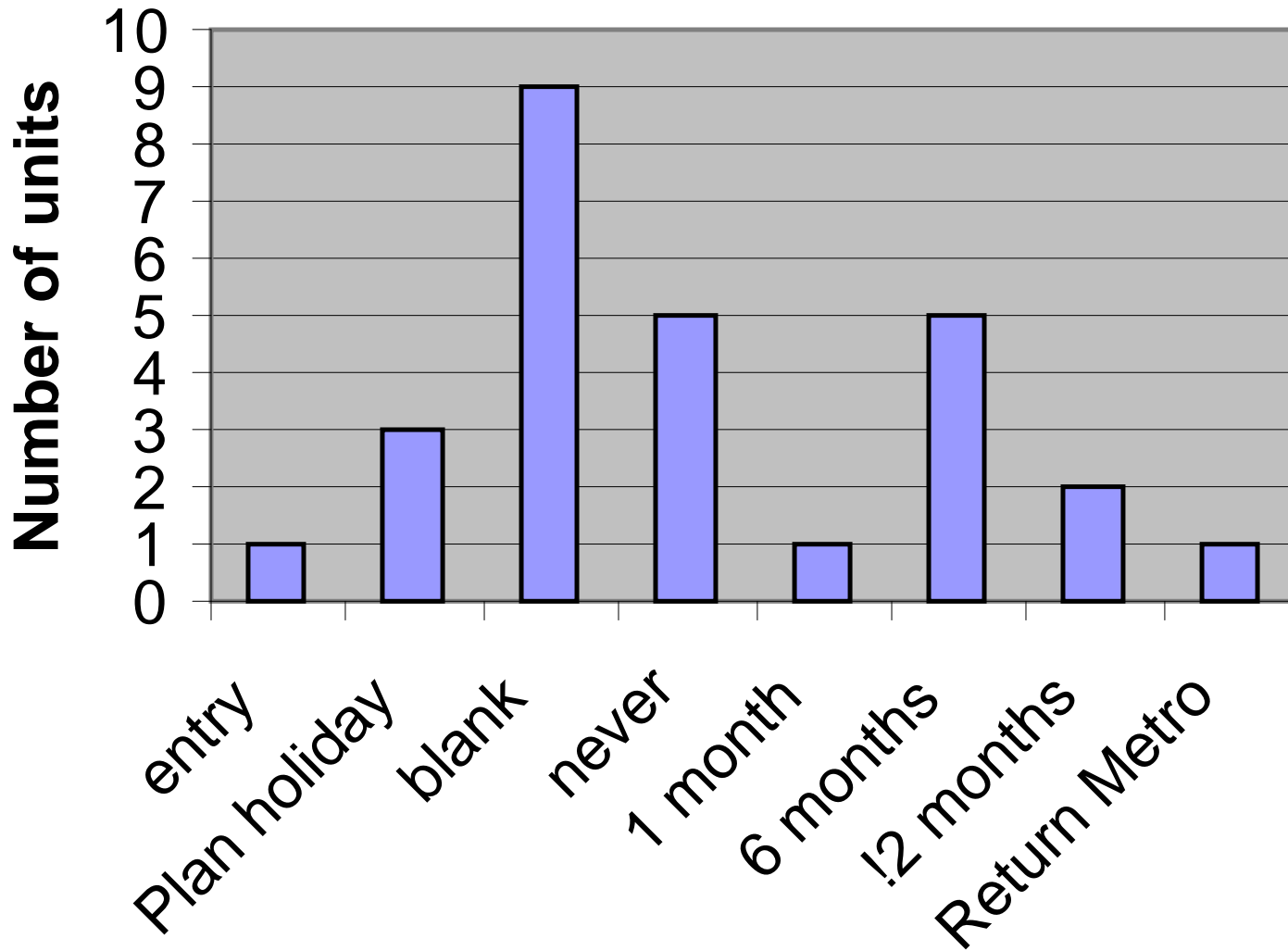


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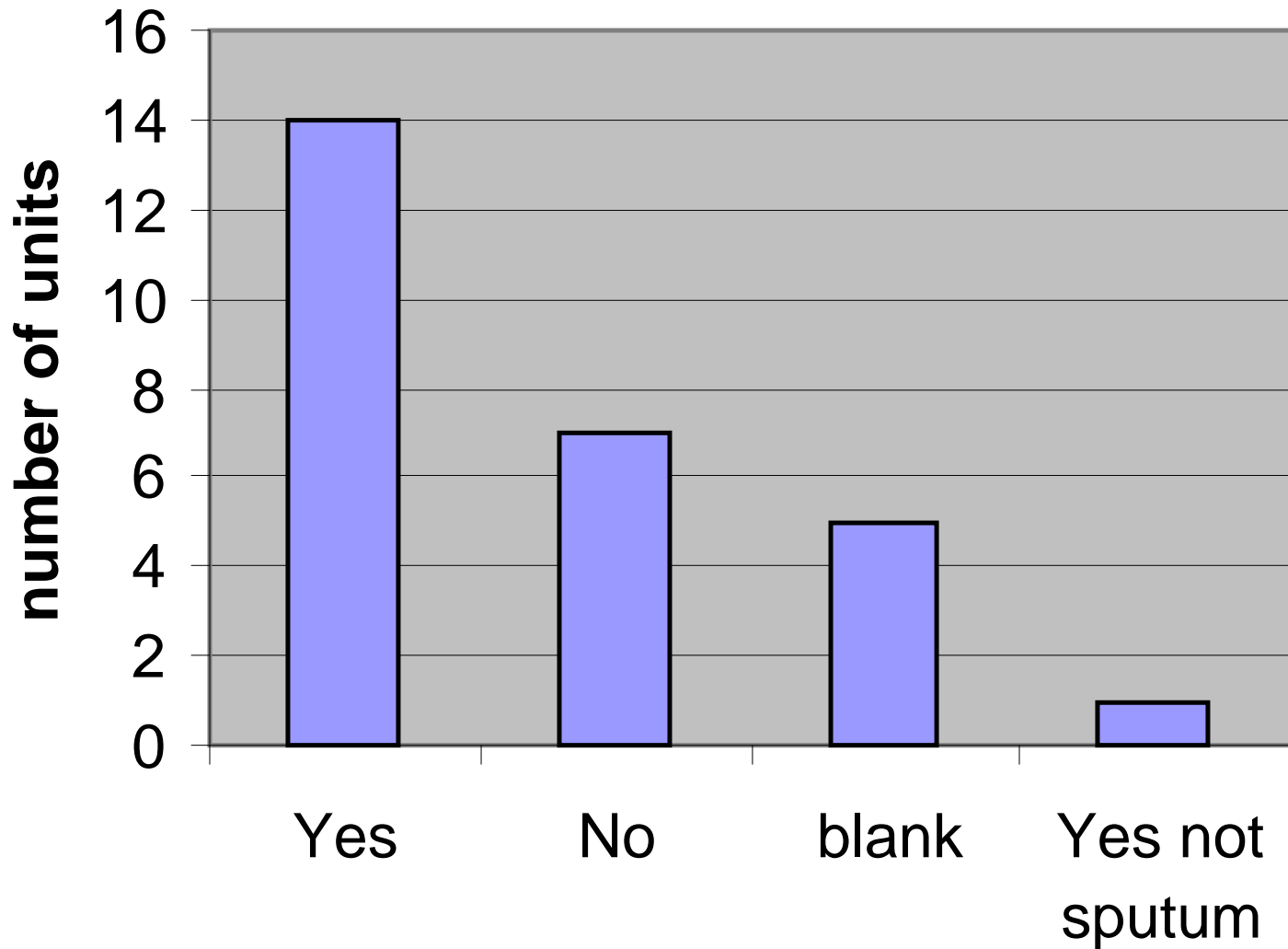
Summary of Policies (HIV)

	Latest Version	Screening	Frequency of screening	Vaccination for Patient	Vaccination for Staff	Isolation
NSW Health Infection Control Policy	2007	Yes	Not mention	Vaccine not available	Vaccine not available	There is insufficient evidence to justify routine use of dedicated machines for dialysis or isolation of patients
Victoria Health Infection Prevention Program	2006	Yes	Not mention	Vaccine not available	Vaccine not available	Not mention
Australia & New Zealand Society of Nephrology, "DNT" Sub-Committee "Consensus Statement"	2001	Yes	Annually	Vaccine not available	Vaccine not available	Not mention
Sydney South West Area Health Service (Western Zone)	2007	Yes	Annually	Vaccine not available	Vaccine not available	Use of single room and dedicated machine

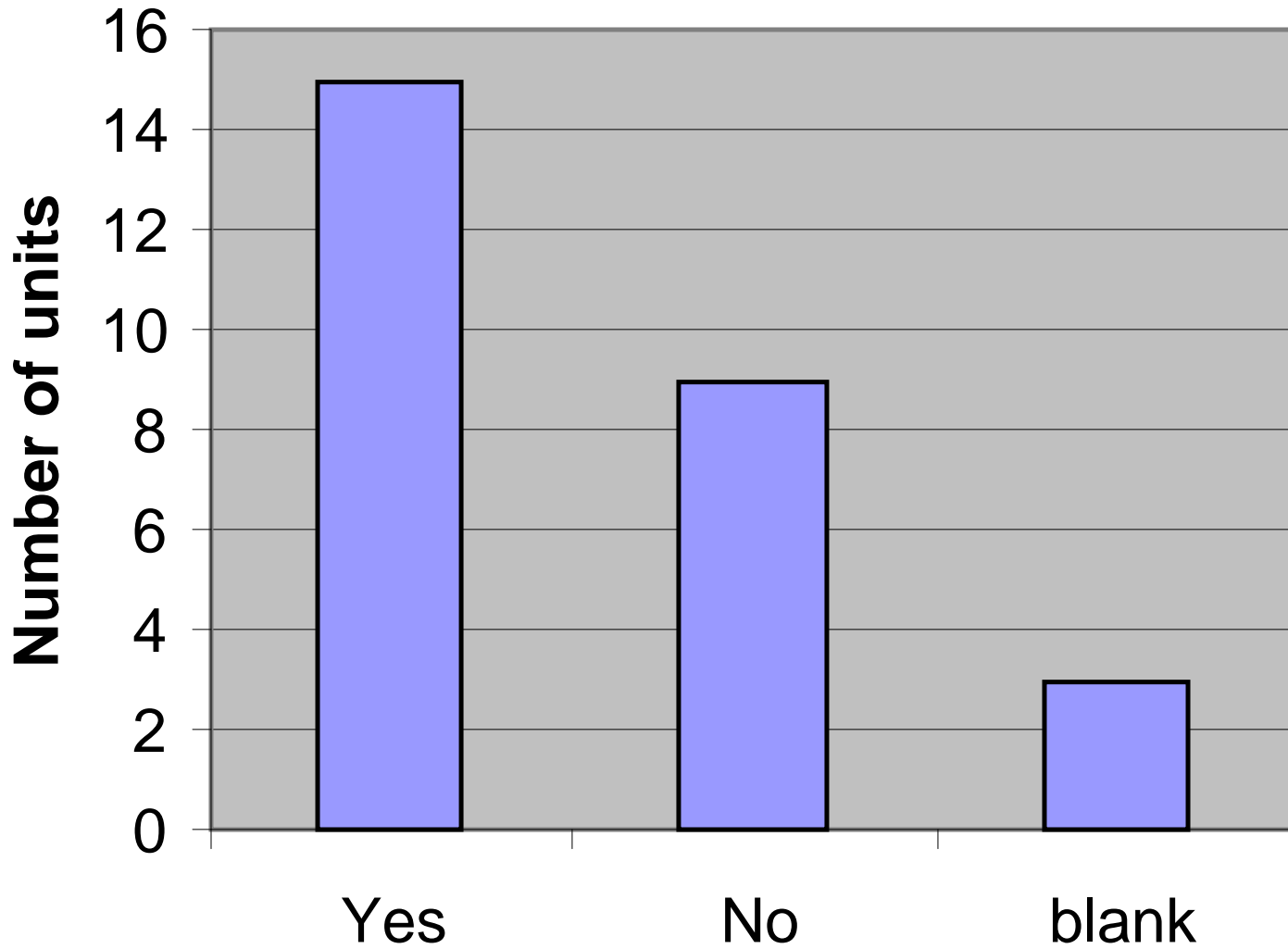
MRSA screening frequency



MRSA holiday acceptance



Isolation of MRSA





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**The good of the many
outweighs the good of the few**



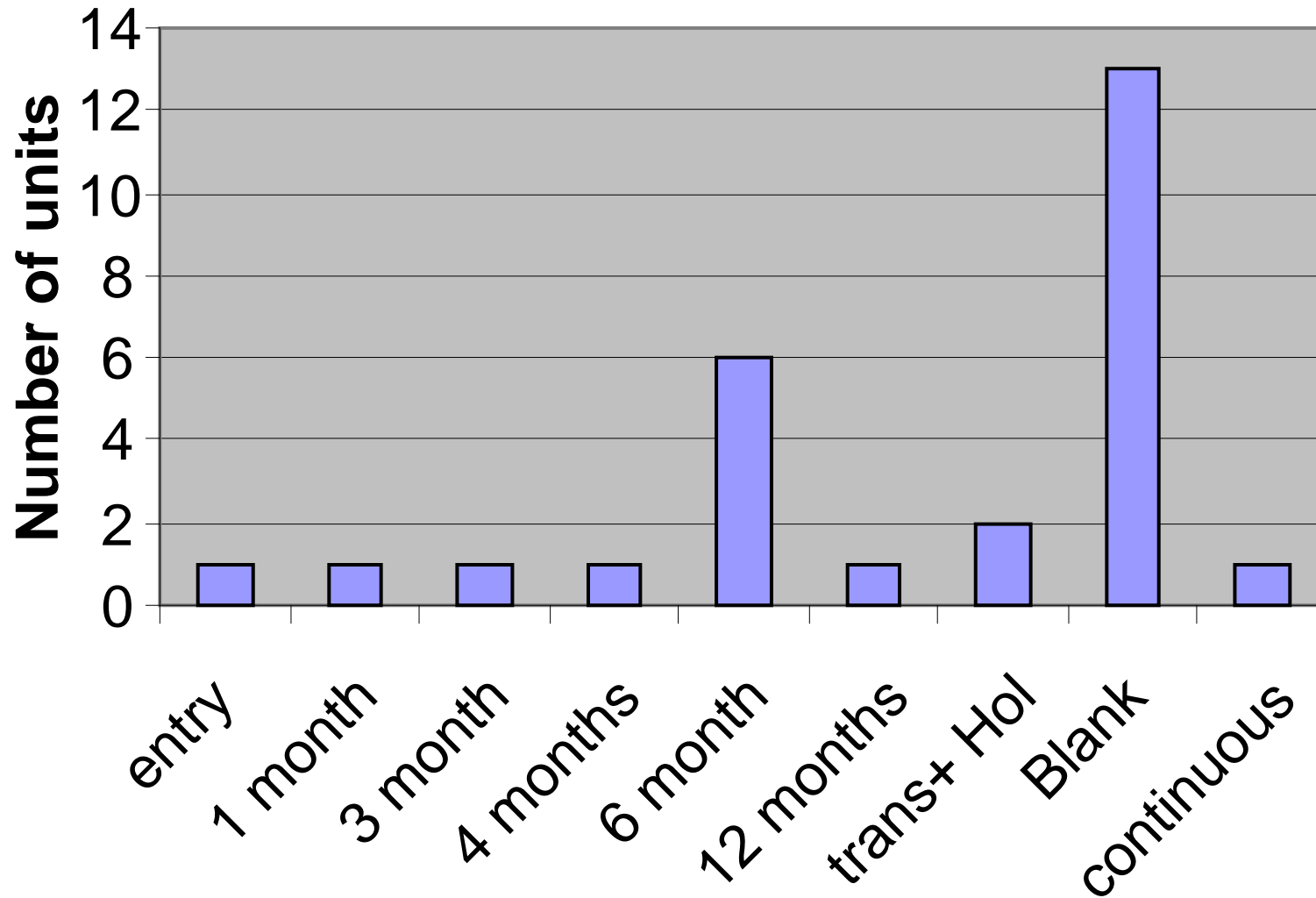


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Summary of Policies (MRSA)

	Latest Version	Screening	Frequency of screening	Isolation
NSW Health Infection Control Policy	2007	No	N/A	Separation area for infected and colonised patients
Victoria Health Infection Prevention Program	2006	Routine screening not recommend	N/A	Dialyse in an area separate or segregated from other patients
Australia & New Zealand Society of Nephrology, DNT" Sub-Committee "Consensus Statement"	2001	Yes	3-6 monthly	Use of separate rooms and dedicated machines is recommended
Sydney South West Area Health Service (Western Zone)	2007	Yes	6 monthly	Use of single room and dedicated machine

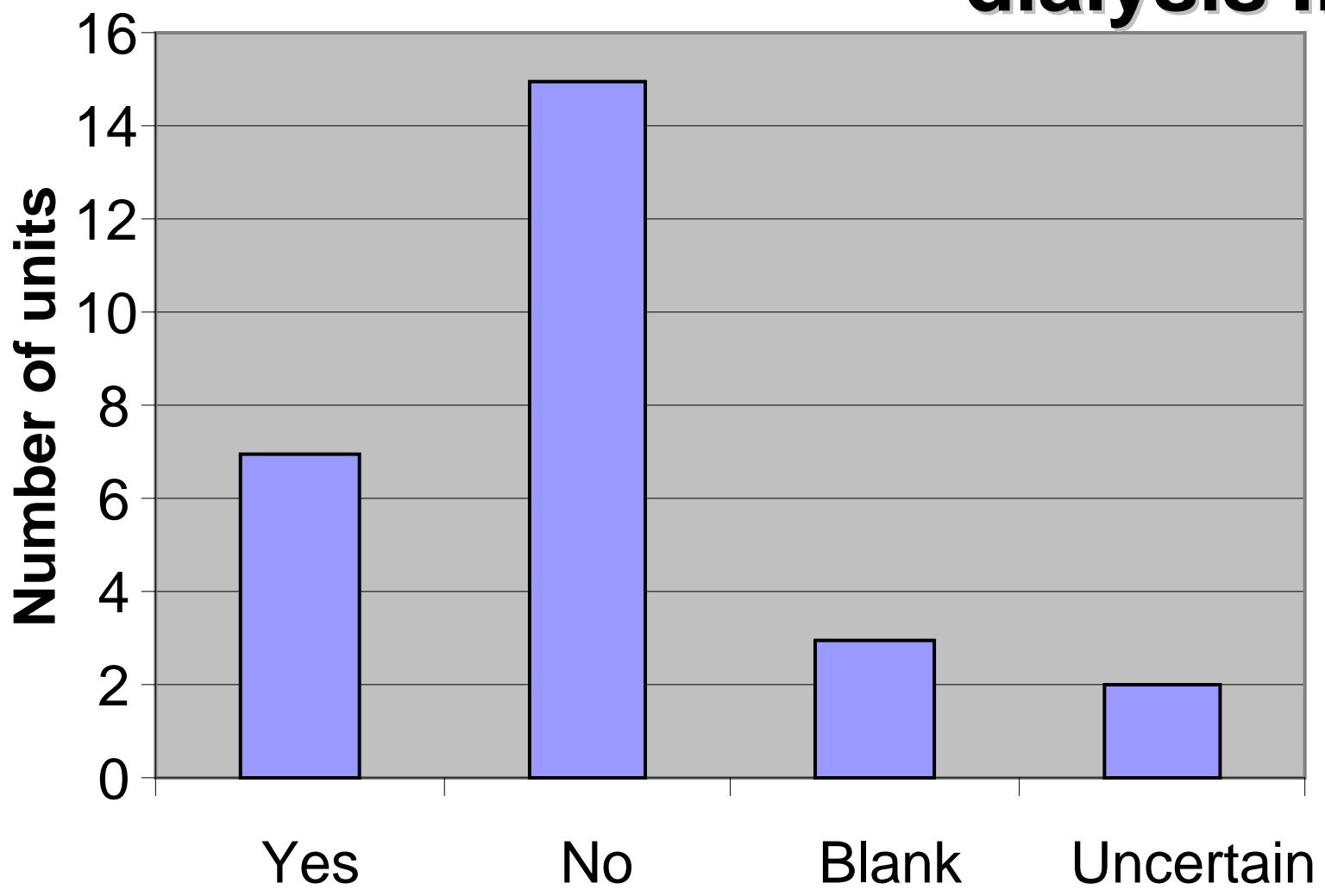
Frequency VRE screening



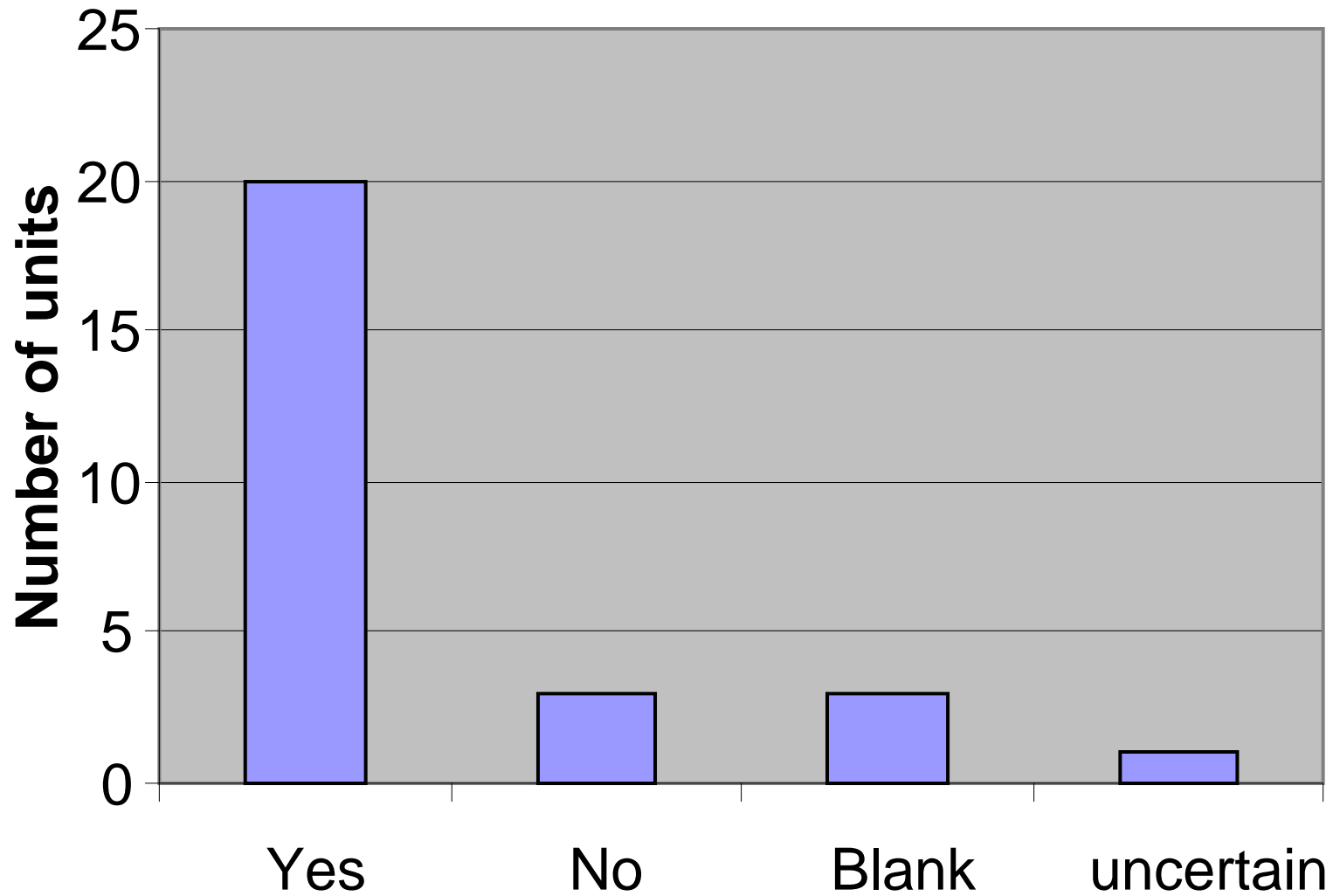


Acceptance for holiday dialysis If VRE

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Isolation with VRE





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Summary of Policies (VRE)

	Latest Version	Screening	Frequency of screening	Isolation
NSW Health Infection Control Policy	2007	VRE screening may be a requirement prior to transfer between dialysis units	Prior to transfer	Separation of patients by room or area and use of a dedicated machine is recommended
Victoria Health Infection Prevention Program	2006	Suggest for in-centre dialysis patient only	Not mention	Dialyse in an area separate or segregated from other patients
Western Australia Guidelines	2006	No	N/A	No
Australia & New Zealand Society of Nephrology, DNT" Sub-Committee "Consensus Statement"	2001	Yes	3-6 monthly	Use of separate rooms and dedicated machines is recommended
Sydney South West Area Health Service (Western Zone)	2007	Yes until Mid 2009	3-6 monthly	Dedicated Isolation Dialysis Unit since 2002



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Comments on the results

- Big variation in practice
- No standardised national guidelines
- Implication on resources
- Clinician's preference
- Lack of evidence



The **A**ustralian **C**ouncil on **H**ealthcare **S**tandards (ACHS)

The ACHS Evaluation and Quality Improvement Program (EQuIP) is a 4 year quality assessment and improvement program



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EQuIP Cycle

Evaluation and Quality Improvement Program Begins



Phase 1 – Self-Assessment

- New members provide a Self-Assessment against all criteria
- Existing members provide a Self-Assessment against all *mandatory criteria*, in addition to the Clinical function criteria OR the Support and Corporate functions criteria
- Progress on recommendations from previous Periodic Review

Phase 2 – Organisation-Wide Survey

- Members provide a Self-Assessment against all criteria in preparation for the onsite survey
- All criteria are surveyed and progress on recommendations from Periodic Review

**ACHS
Accreditation**

Phase 4 – Periodic Review

- Members provide a Self-Assessment against all *mandatory criteria* in preparation for the onsite survey
- *Mandatory criteria* is surveyed and progress on recommendations from Organisation-Wide Survey

Phase 3 – Self-Assessment

- Members provide a Self-Assessment against all *mandatory criteria* and the function(s) not addressed in Phase 1
- Progress on recommendations from Organisation-Wide Survey

EQuIP is a four year program with at least one activity per year.



ACHS References: EQulP 4 criterion 1.5.2 Mandatory

The infection control system supports safe practice and ensures a safe environment for consumers/patients and health care workers.



Infection control

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All health care organisations must have processes in place to **identify**, **monitor** and **audit** infections to minimise occurrence. The infection control system includes a surveillance system, hand hygiene policy, and a management plan for antibiotic use and intravenous devices. Single use items should comply with industry standards and not be reused.



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Criterion Achievement Ratings

- Level 1 Little Achievement (LA)
- Level 2 Some Achievement (SA)
- Level 3 Moderate Achievement (MA)
- Level 4 Extensive Achievement (EA)
- Level 5 Outstanding Achievement (OA)



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Quality Improvement Project



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Interventional Nephrology

A horizon of clinical practice in dialysis access management

**A/Professor Josephine Chow, Wong, J, Spicer T,
Gonzalez N & Suranyi M**



Background

- Problems with prompt theatre time for dialysis access surgery
- Reliance on temporary or tunnelled HD catheters and its consequences
- Bridging catheters, average of 139 days (4.6 months)
- Increase access related bacteraemia



Aim

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- To reduce unnecessary admissions
- To better utilise inpatient beds
- To reduce waiting time for dialysis access surgery
- To reduce access related bacteraemia

Stretch goals

- Implementation of an effective system to manage dialysis access
- Improve centrally inserted haemodialysis line associated bacteraemia by 40% in 18 months

Patient factors:

Demographic, body mass index,
NESB, co-morbidity, lack of patient
education, 8-10% patient growth

Economic constraints:

Costly procedures
Lack of monitoring systems on dialysis
access management



**Poor dialysis
access
management**

Procedural constraints:

Surgical technique
Inadequate dedicated operating lists
Reliance on temporary access
Long-waiting list

Staffing:

Lack of or inadequate dedicated vascular
access surgeons
Lack of case manager

Increase morbidity & mortality
Increase hospitalisation
Increase use of antibiotics
Development of multi-resistance infections





Rescue team

Interventional
Nephrology





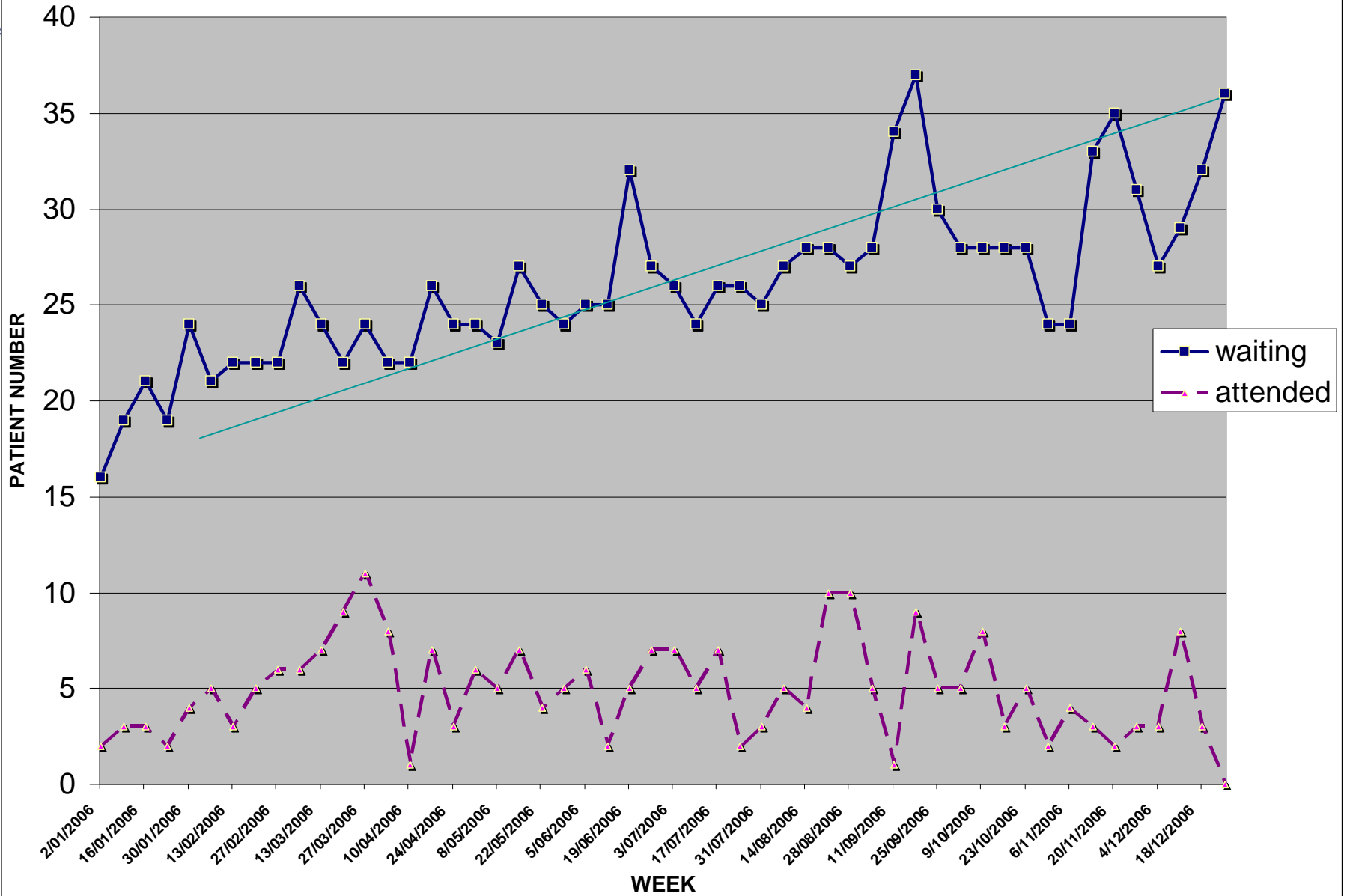
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Administrator



**Dialysis Access
Coordinator**

THEATRE ACTIVITIES (WAITING AND ATTENDED) 2006





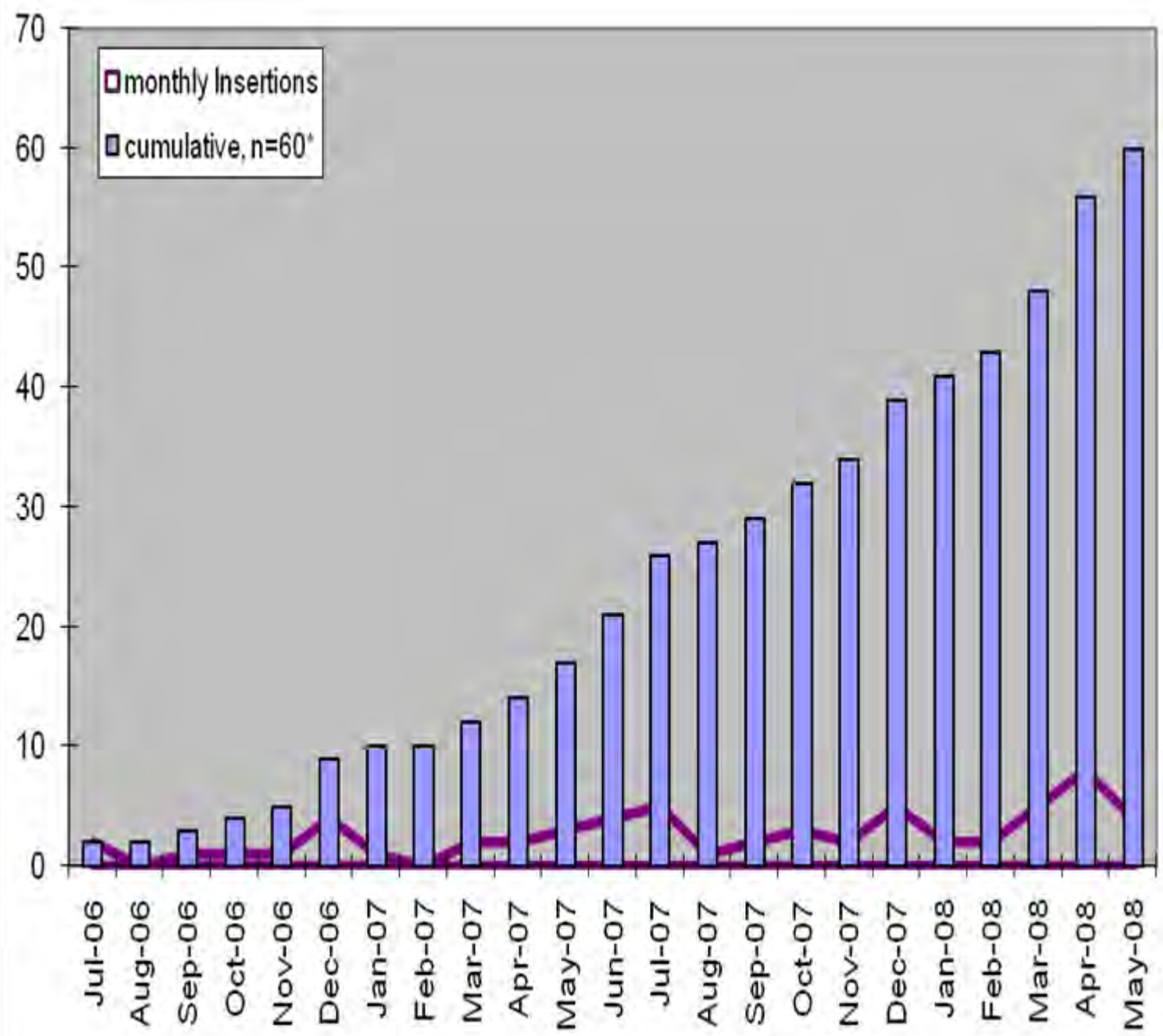
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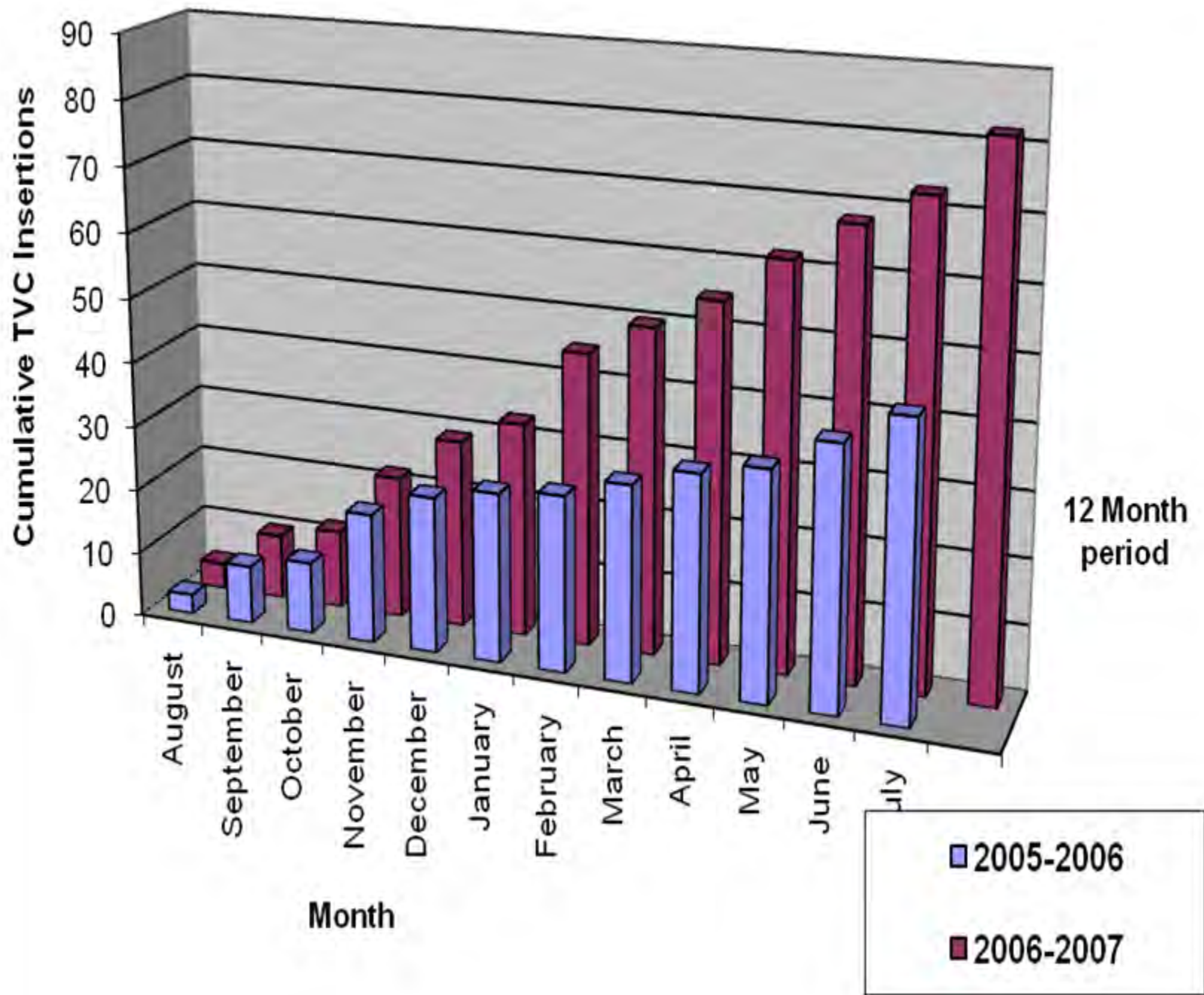
Planning & implementation

- Renal medical staff was credentialed in the insertion of TVC and to perform peritoneoscopic insertion of PD catheters.
- Dialysis rooms was converted to a procedure room.
- A new role of Dialysis Access Coordinator was established.
- Weekly patient review meetings have been established.
- Review of current policies and procedures.
- Education and training of staff in complying with these policies.

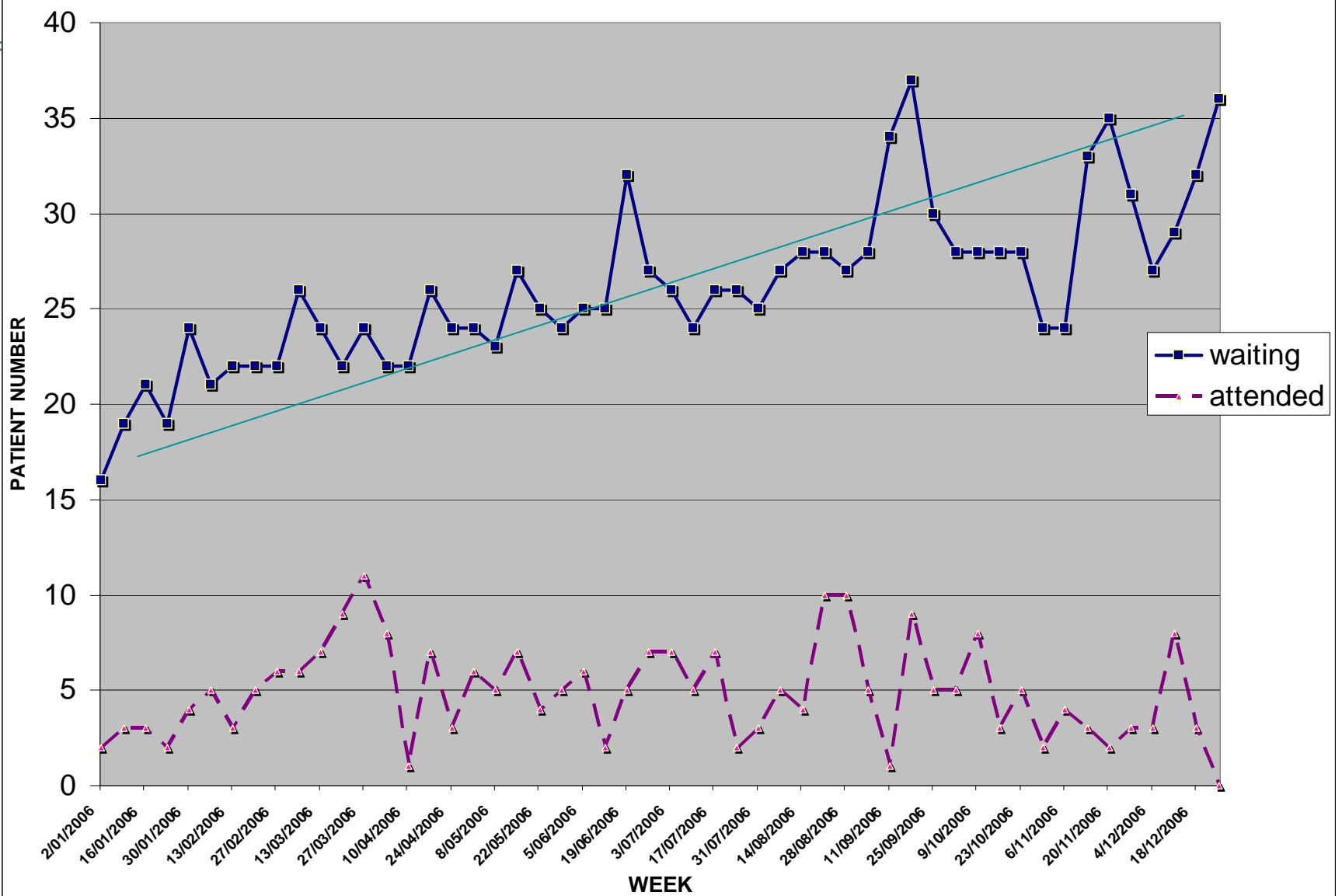


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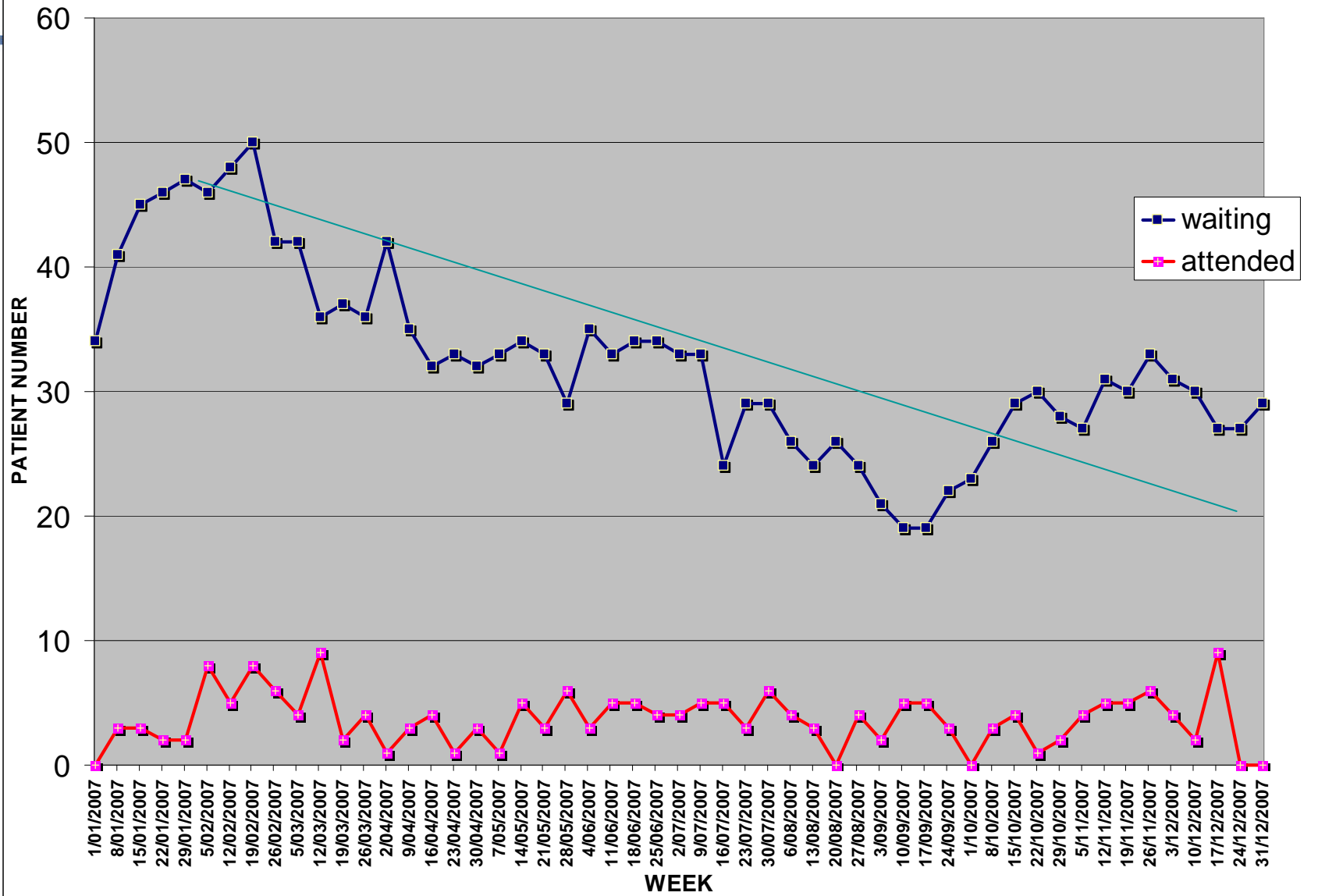




THEATRE ACTIVITIES (WAITING AND ATTENDED) 2006



THEATRE ACTIVITIES (WAITING AND ATTENDED) 2007





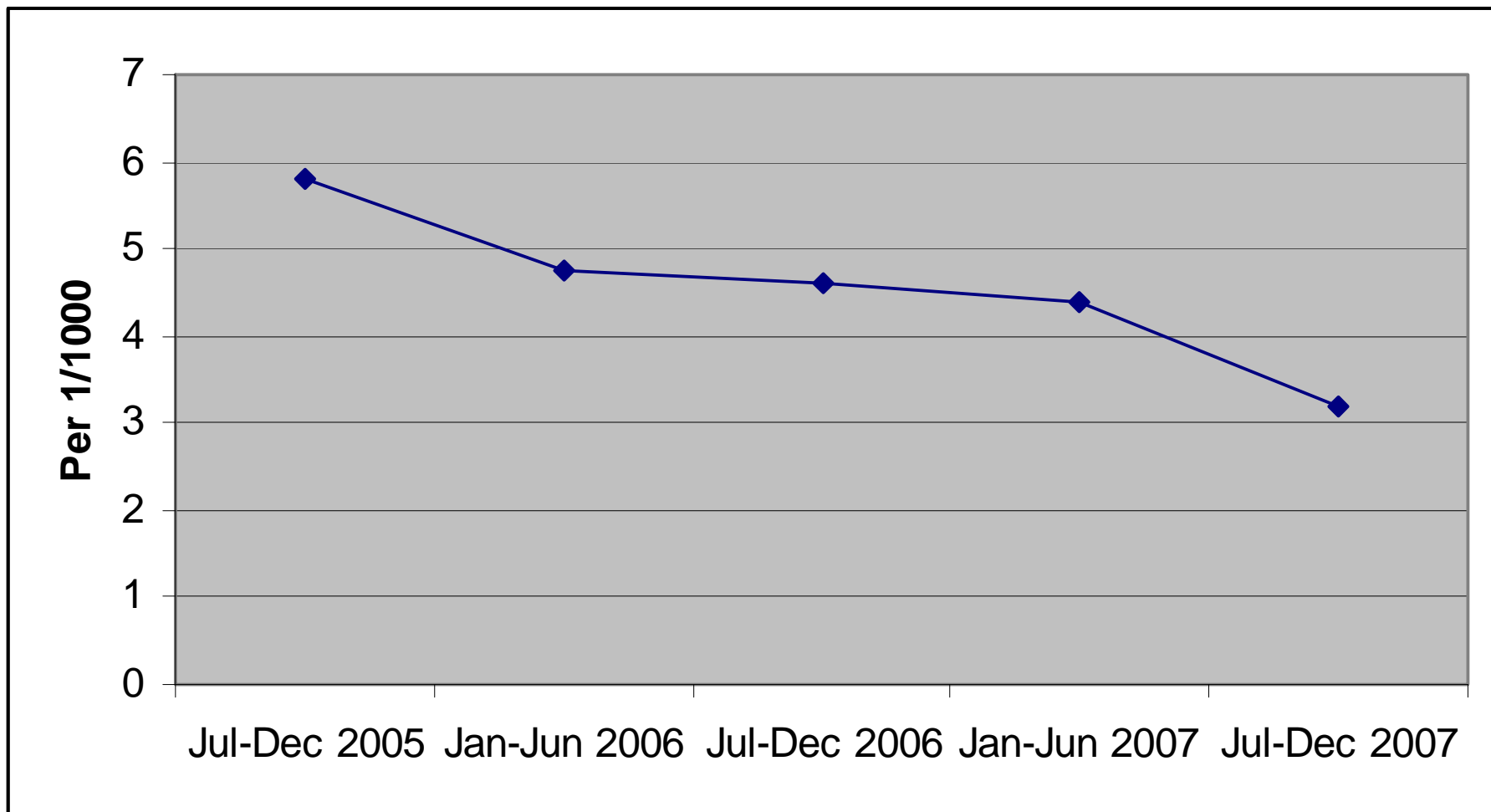
Outcome evaluation

- Avoiding requirement for general anaesthetic
- Reduction of theatre waiting list for dialysis access surgery
- Increase/improvement in patient choice of management
- More timely dialysis access creation
- **Reduction of Vas Catheter usage by 5%**
- Prompt intervention for infection, blocked access or other access issues
- Insertion of immediately usable dialysis access, especially in acute cases
- Most procedures are managed as a non-inpatient setting
- **Reduction in hospital length of stay by at least 321 bed days**
- Additional saving in ERE



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Reduction in centrally inserted haemodialysis line associated blood stream infection by 44.8%





Conclusions

- **Successful initiative**
- **Create a better experience in health care**
- **Cost saving**
- **Improve patient outcomes**
- **Sustaining change**
- **Future scope**



Never give up

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We need to be innovative

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ACHS Clinical Indicator

- **1.5.2 Infection control**
- Percentage of compliances with an hospital cleanliness audit
- Percentage of clusters and trends which are reviewed and followed up
- Percentage of staff who attended annual infection control training
- Percentage of compliances with AS4187 audits
- Percentage of needle stick incidents from recapping
- Percentage of body fluid exposures
- Percentage of non/percutaneous occupational exposures due to non-compliant behaviour
- Percentage of surgical consumers/patients who received AMP (Surgical antimicrobial prophylaxis) within 1 hour prior to surgical incision (or 2 hours if receiving vancomycin)
- Percentage of surgical consumers/patients who received AMP recommended for their surgical procedure
- Percentage of surgical consumers/patients whose prophylactic antibiotics were discontinued within 24 hours after surgery end time



ACHS Clinical Indicator

Haemodialysis Access- Associated BSI8

- Haemodialysis associated Blood Stream Infection (BSI) is defined as a BSI in a patient receiving haemodialysis where there is clinical infection at the site of vascular access
- *Numerator*
 - Blood Stream Infection in a patient undergoing haemodialysis local access site infection
- *Denominator*
 - Rates per 100 patient months
 - These should then be stratified by vascular access type.
- Vascular access types are:
 - Graft
 - Synthetic
 - Native vein
 - Fistula
 - Temporary catheter (non-cuffed)
 - Permanent Catheter (cuffed)



SSWAHS, WZ

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Haemodialysis fistula-associated blood stream infections

2. Clinical Indicator : Haemodialysis fistula-associated blood stream infections

EQulP 4, 3.1

Numerator	The number of AVF access-associated blood stream infections during the period under study					
Denominator	The number of patient-months for patients dialysed through AVF during the time period under study					
	Jul-Dec 2006	Jan-Jun 2007	Jul-Dec 2007	Jan-Jun 2008	July-Dec 2008	Jan-Jun 2009
Numerator	0	0	3	4	0	5
Denominator	849	907	954	1002	1110	1068
rate %	0%	0%	3%	4%	0%	4%

Haemodialysis synthetic graft associated blood stream infections

3. Clinical Indicator : Haemodialysis synthetic graft associated blood stream infections

EQulP 4, 3.2

Numerator	The number of synthetic graft associated blood stream infections during the period of study					
Denominator	The number of patient-months for patients dialysed through synthetic grafts during the time period under study					

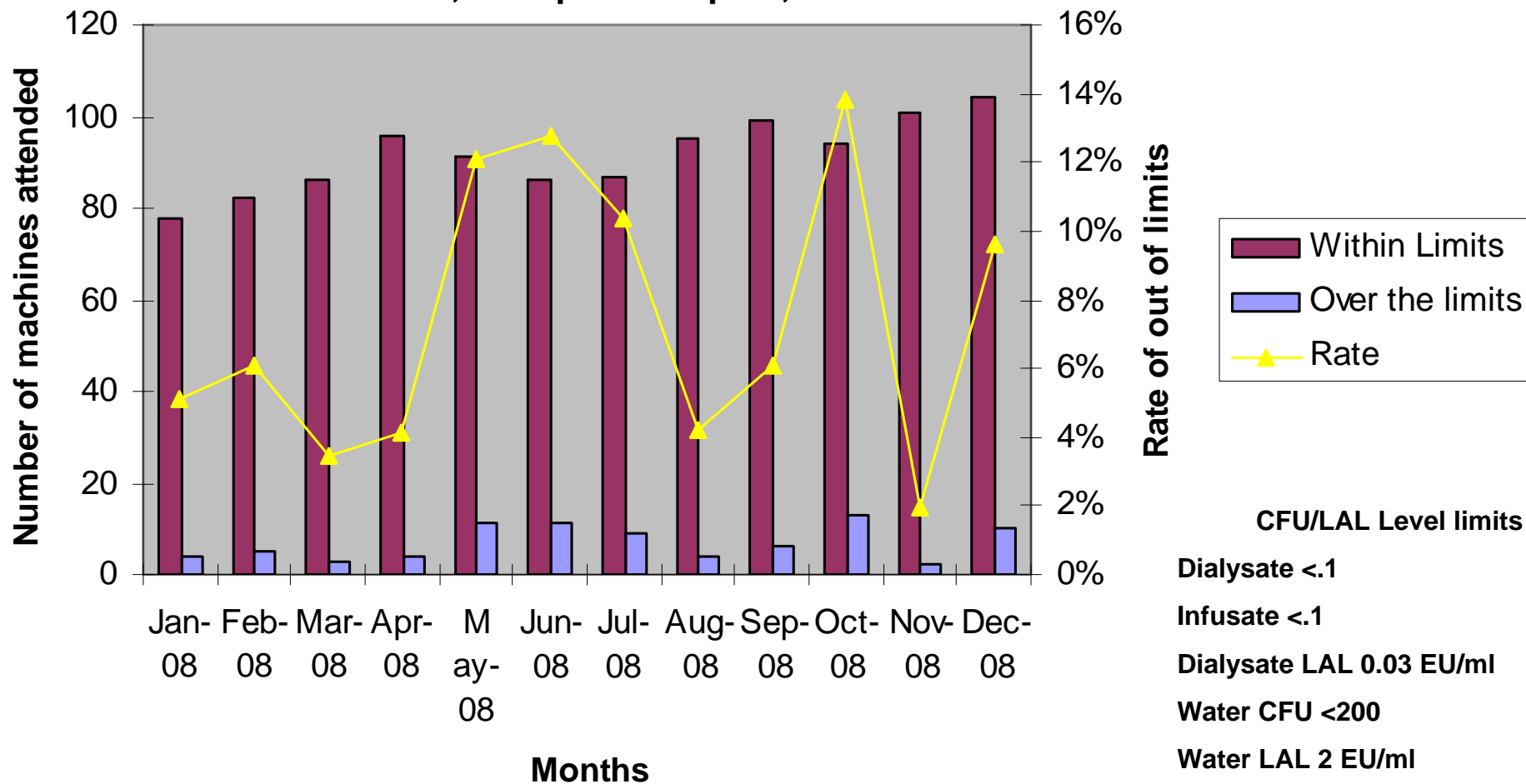
	Jul-Dec 2006	Jan-Jun 2007	Jul-Dec 2007	Jan-Jun 2008	July-Dec 2008	Jan-June 2009
Numerator	4	2	4	3	1	7
Denominator	97.2	114	108	129	192	252
rate %	4%	2%	4%	2%	1%	3%



CFU Results

Dialysate & RO Water CFU Results + Rate: All Units

SSWAHS, Liverpool Hospital, 2008

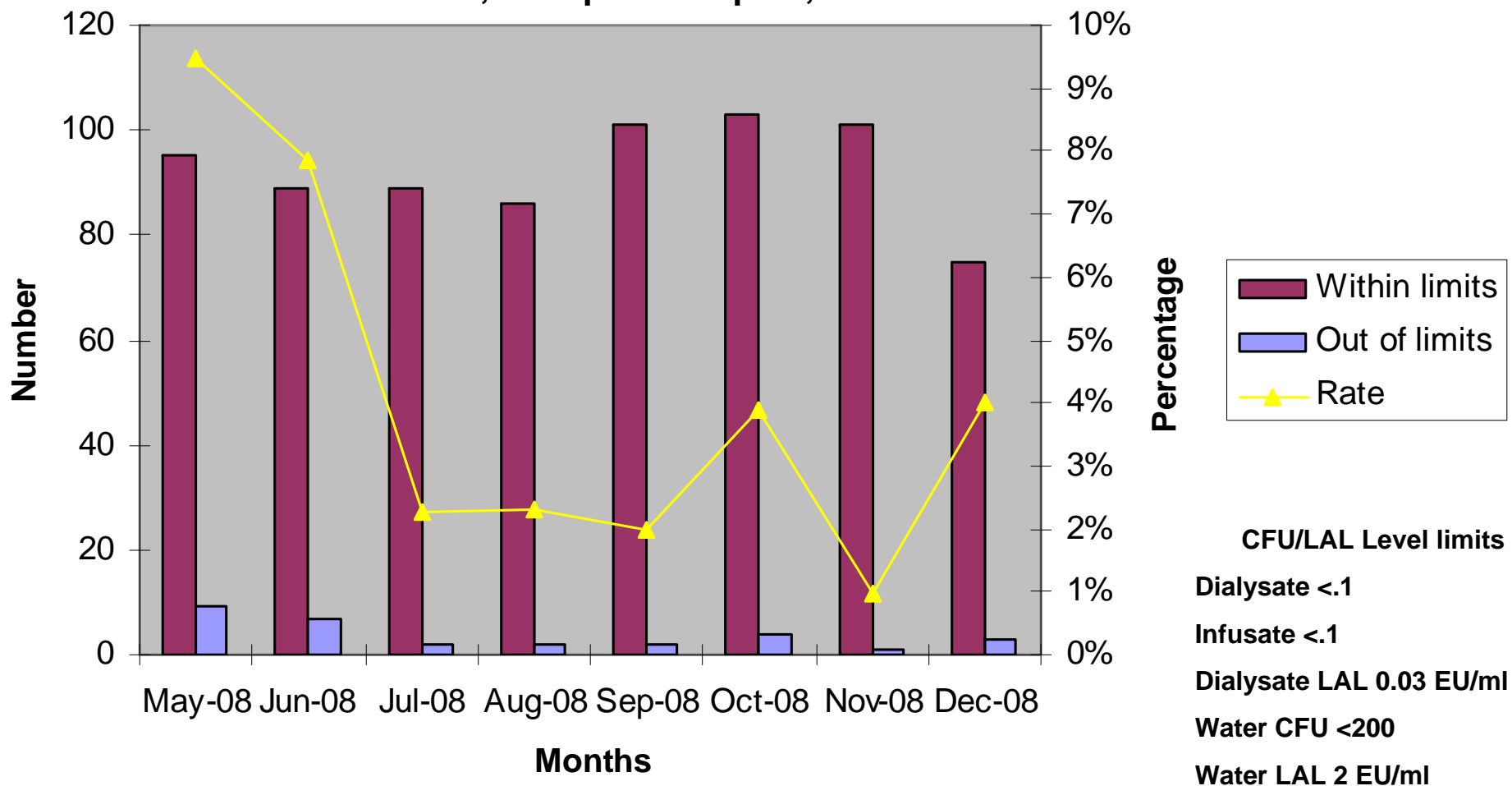




Endotoxin Results

Dialysate & RO Water Endotoxin Aggregated Results

SSWAHS, Liverpool Hospital, 2008





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The Renal Health Facility Guideline

ACCREDITED SURFACES

- All surfaces and fixtures are to be designed to enable easy and thorough cleaning on a regular and repeated basis.
- Convenient and adequate placement of suitable hand wash basins at a rate of one per three (3) treatment bays as well as in all separate treatment areas, utility areas, toilets and showers.
- Alcohol hand-rub dispensers should be at the entrance of each treatment room and within each treatment bay.
- Class S isolation rooms should be provided at the rate of one isolation room to every five (5) treatment bays.
- A Class S room is a single room with a shower/toilet en suite.
- A self-closing door is recommended.
- A Personal Protective Equipment (PPE) Bay should be provided immediately outside the room.
- Air-conditioning rather than natural ventilation should be provided to the Unit.
- All airconditioning filters for the systems that service the Unit should be changed/cleaned at a rate consistent with the manufacturer's requirements.
- Floors coverings must be easy to clean and resistant to disinfection procedures.
- All treatment areas should not be carpeted.
- Floors in food preparation areas should be water resistant and greaseproof.
- Wall skirting bases in treatment areas, kitchens, clean and dirty utility rooms and toilets should be made integral to the floor, tightly sealed against the wall.
- Skirting in showers should extend all the way up the wall.
- Wall finishes must be scrubbable and should be smooth and water-resistant especially in the immediate vicinity of plumbing fixtures.
- All exposed ceilings and ceiling structures must be easy to clean.
- Washable blinds are preferable to curtains as they retain less



Summary

- HCW are accountable to quality patient care
- Accreditation can be daunting
- Be innovative and never give up
- Never leave it the last minutes
- Importance of clinical data
- Benchmark



Thank you

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