

Tracking Peritonitis Affects What We Teach

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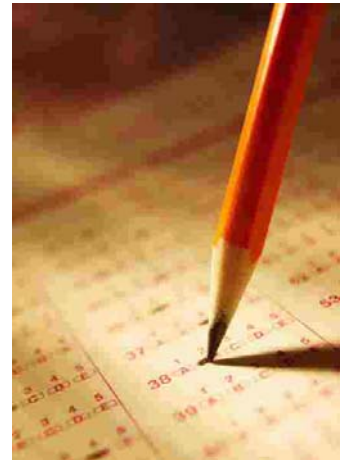
And

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May 12, 2007

Objectives

- To share with you the factors that affect peritonitis rates in TSH
- To examine the results
- To evaluate possible theories
- To show how we have adapted teaching methods and practices



CQI

- CQI = Continuous Quality Improvement
- A CQI initiative is a management philosophy that requires an organized team to routinely monitor patient data in order to evaluate and update practices to improve outcomes (Bowe & Ammel, 2005).



ISPD GUIDELINES/RECOMMENDATIONS

PERITONEAL DIALYSIS-RELATED INFECTIONS RECOMMENDATIONS: 2005 UPDATE

Beth Piraino,¹ George R. Bailie,² Judith Bernardini,¹ Elisabeth Boeschoten,³ Amit Gupta,⁴ Clifford Holmes,⁵ Ed J. Kuijper,⁶ Philip Kam-Tao Li,⁷ Wai-Choong Lye,⁸ Salim Mujais,⁵ David L. Paterson,⁹ Miguel Perez Fontan,¹⁰ Alfonso Ramos,¹¹ Franz Schaefer,¹² and Linda Uttley¹³

PREVENTION OF PD-RELATED INFECTIONS

- Every effort should be made in each PD program to prevent peritonitis to optimize outcomes on PD. Every program should monitor infection rates, at a minimum, on a yearly basis (*Opinion*) (12–14).

Programs should carefully monitor all PD-related infections, both exit-site infections and peritonitis, including the presumed cause and cultured organisms, as part of a continuous quality improvement program. The fre-

Peritonitis



- Peritonitis:
 - $\text{WBC} > 100 \text{ cells/uL}$ and neutrophils $> 50\%$
- New episode: infection 4 weeks after completion of therapy for an earlier episode either with the same or different organism

Tracking Peritonitis At TSH

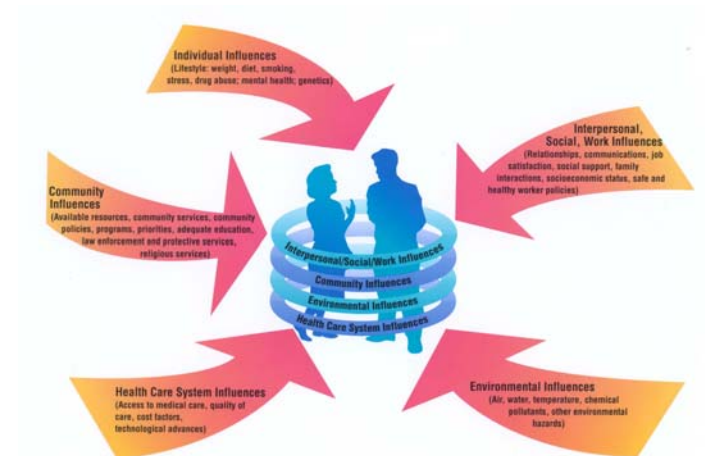
- Catheter insertion dates
- Catheter removal dates and reasons
- Catheter events: e.g., manipulation
- Infections: peritonitis, tunnel & exit sites



Peritonitis Rates

Peritonitis rates are affected by:

- Exit site infections
- Modalities: CAPD > CCPD
- Age
- Genders
- Diabetic / Non-diabetic



“Useless Information” Related To Peritonitis In 2005

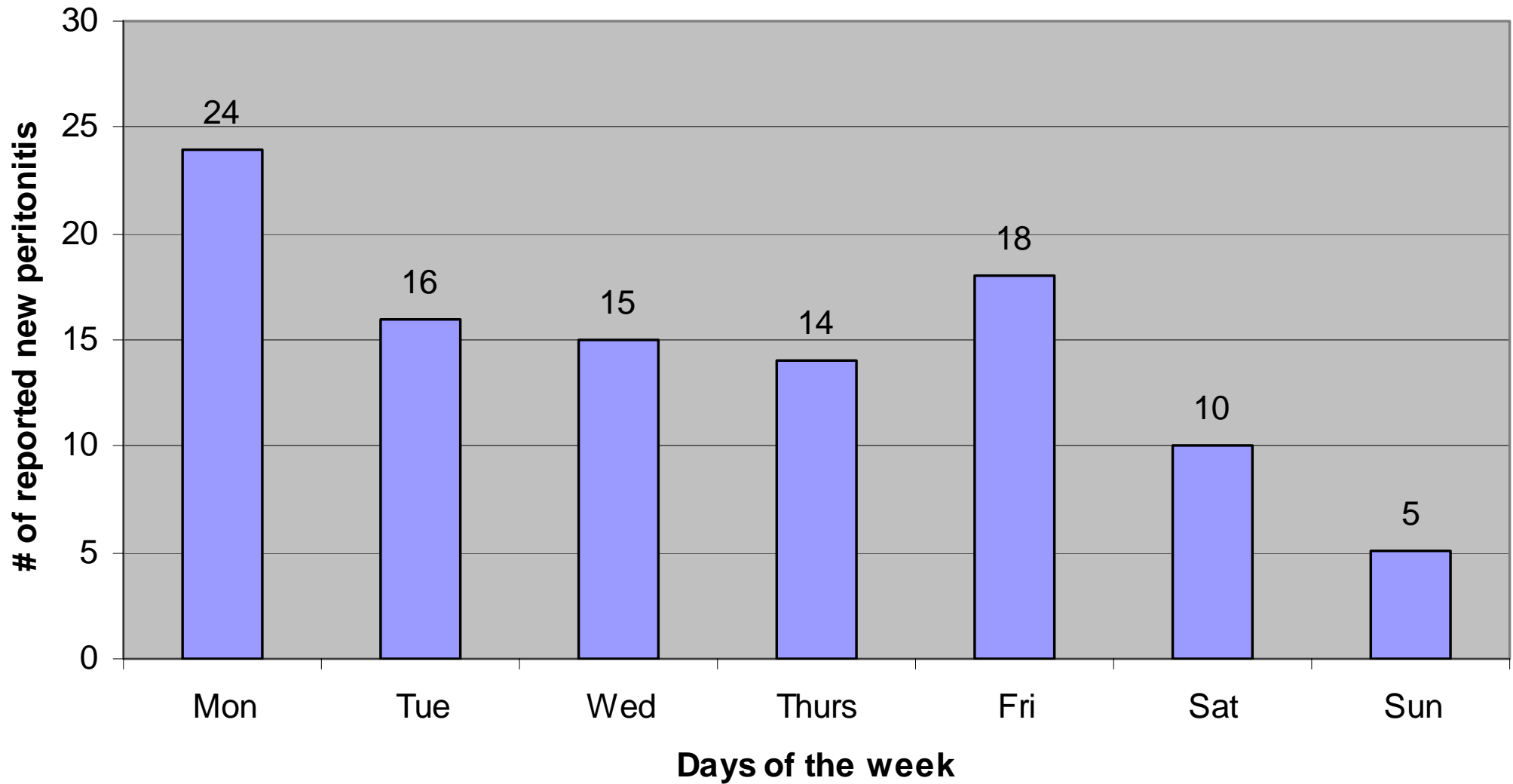
- Most infections were reported on Monday
- The largest clusters of peritonitis occurred in the spring and summer
- Dialysis treatments in own room had fewer peritonitis episodes



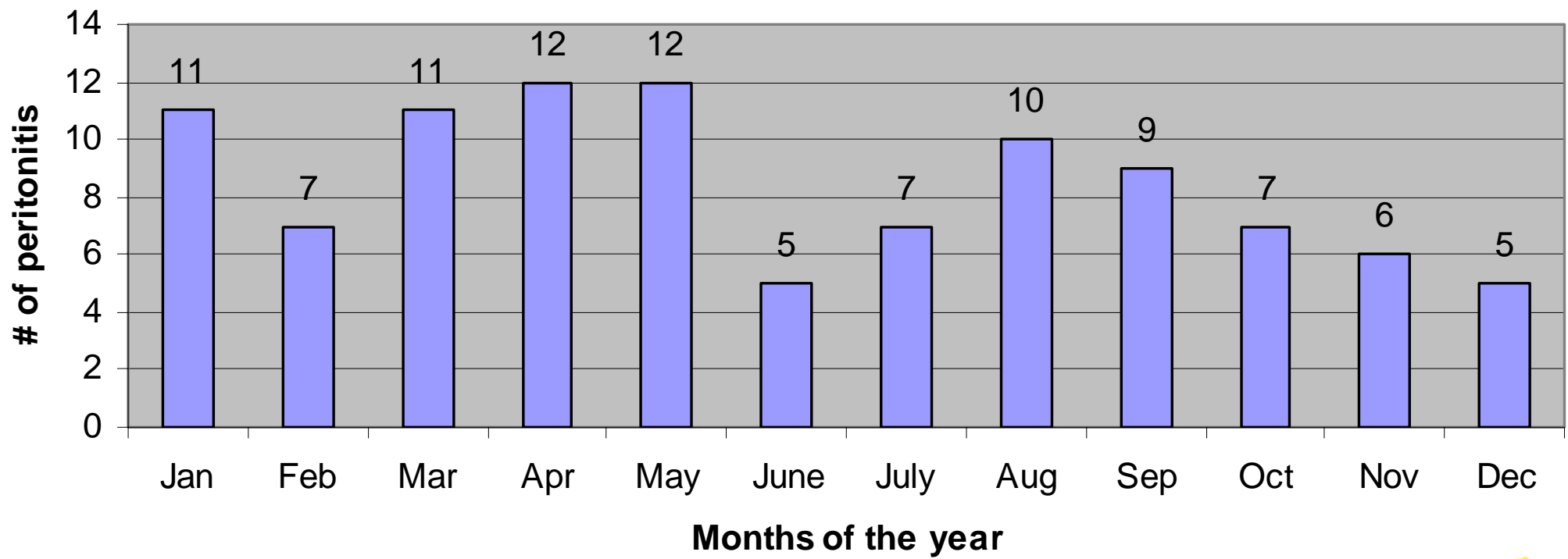
How did we do in 2006?



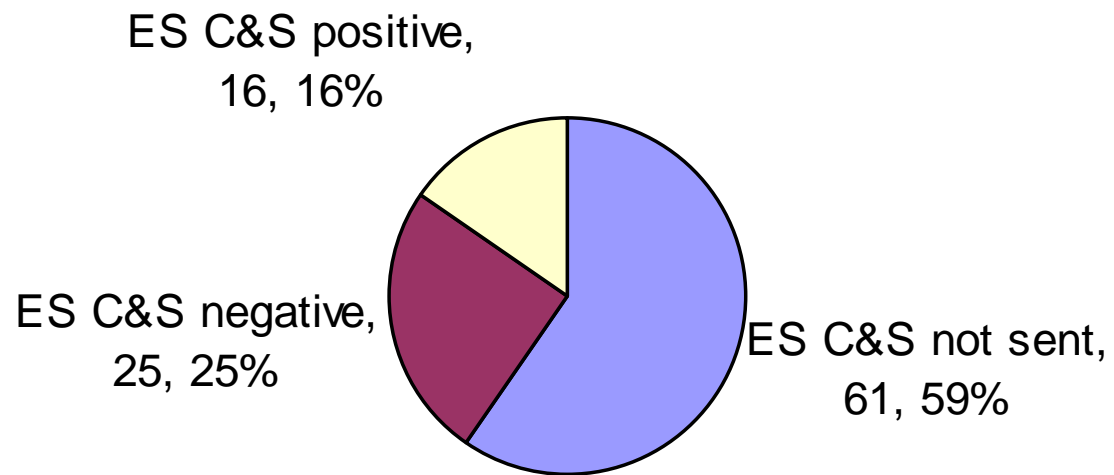
New Peritonitis Reported On Days Of The Week in 2006, n = 102



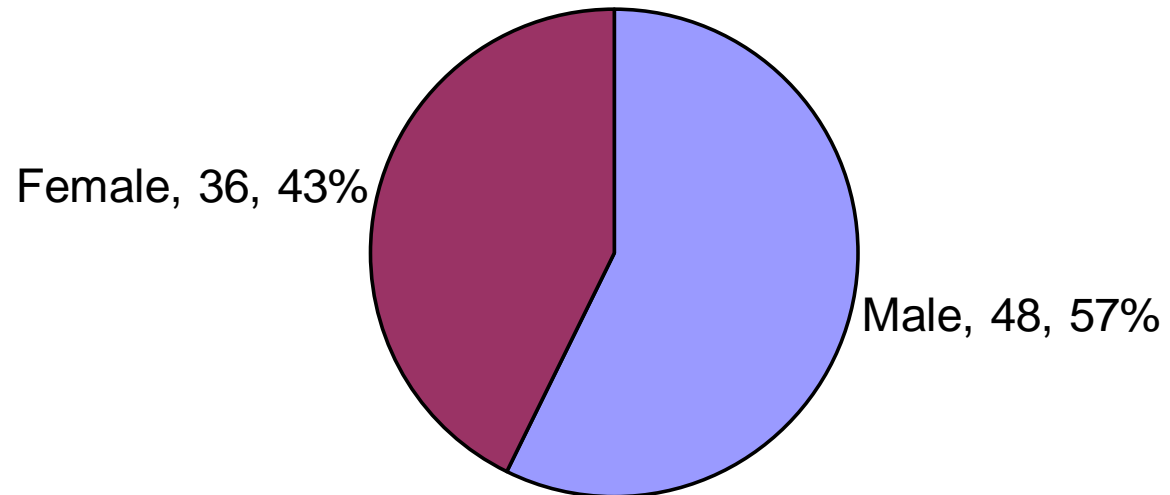
New Peritonitis In Months Of The Year In 2006, n = 102



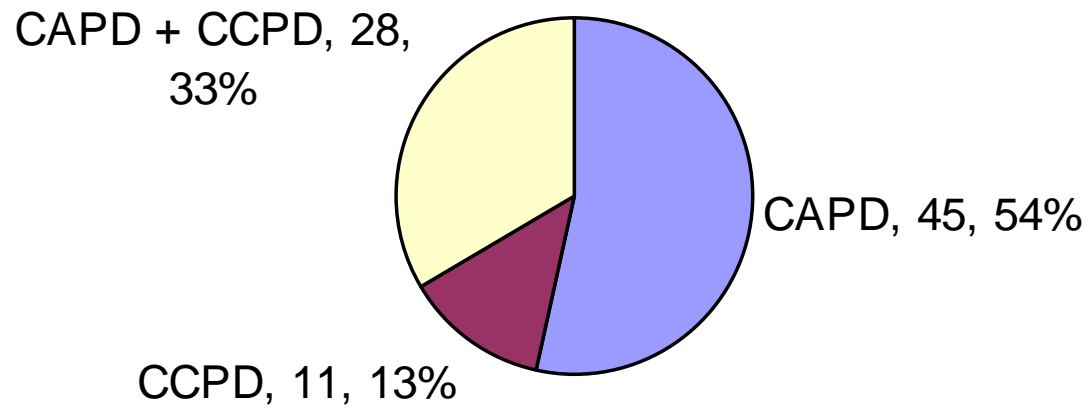
Conditions Of Exit Sites With Peritonitis In 2006, n = 102



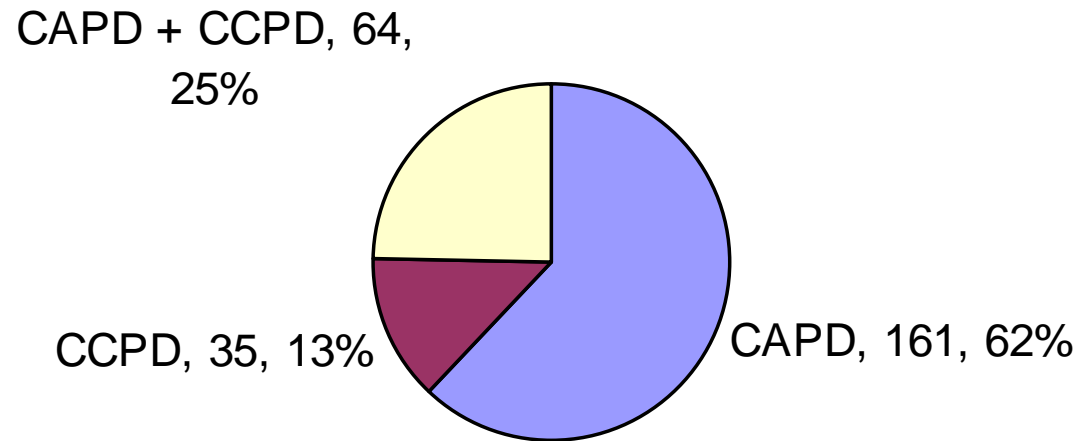
Genders Of Patients With Peritonitis in 2006, n = 84



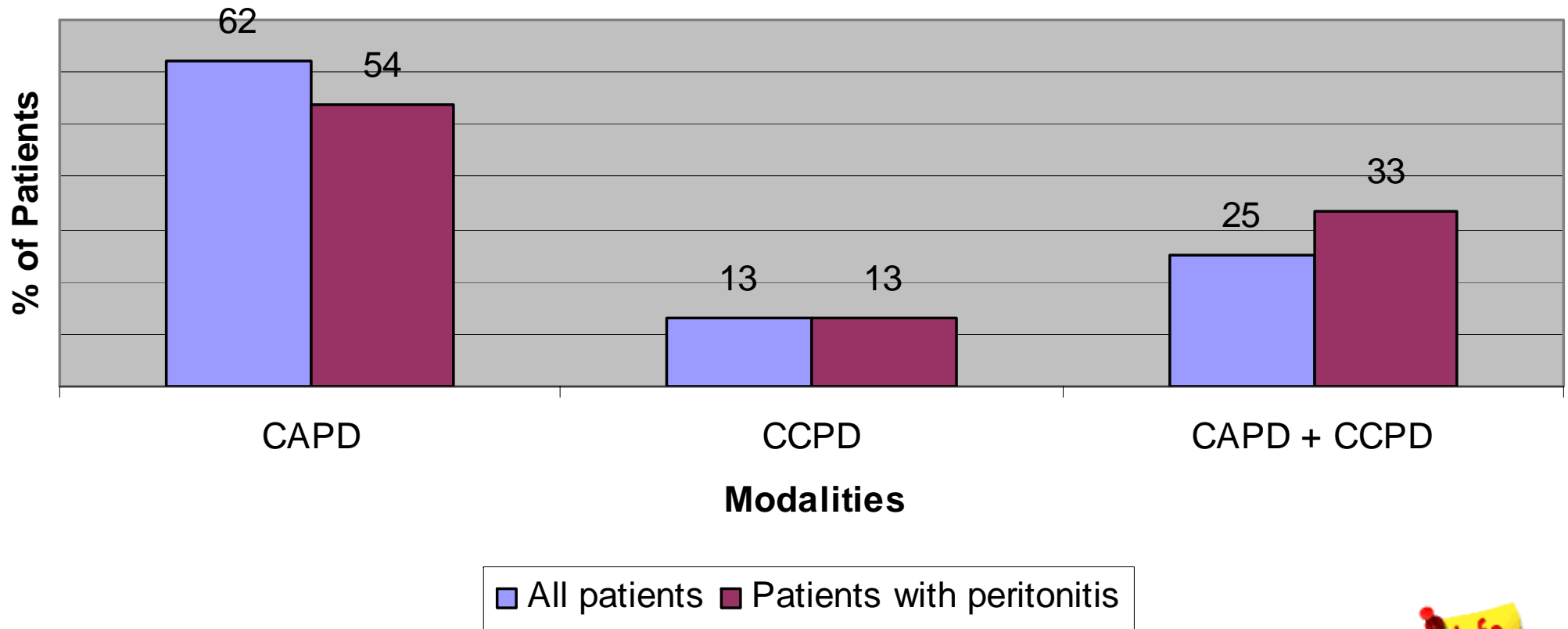
Modality Of Patients With Peritonitis in 2006, n = 84



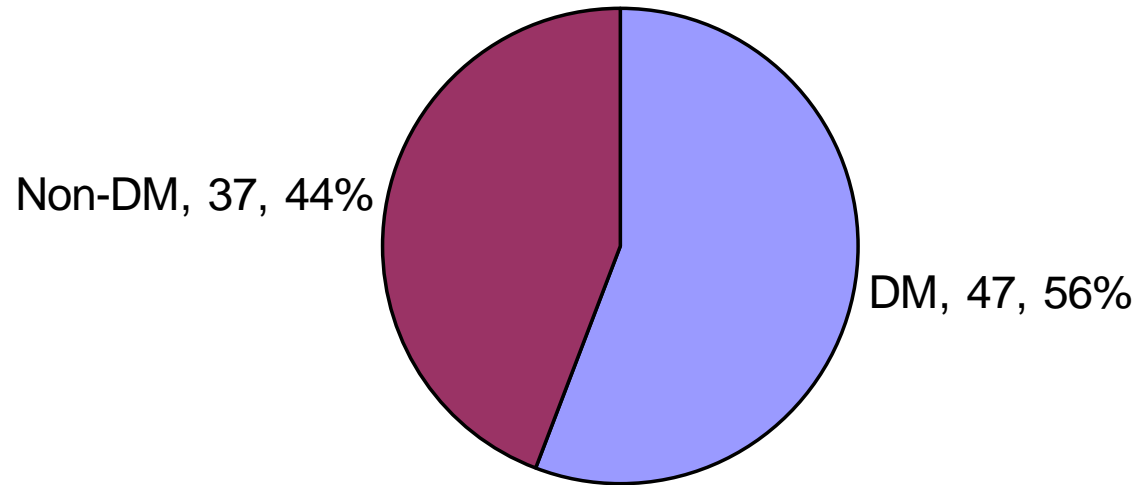
Modality Of All Patients In 2006, n = 260



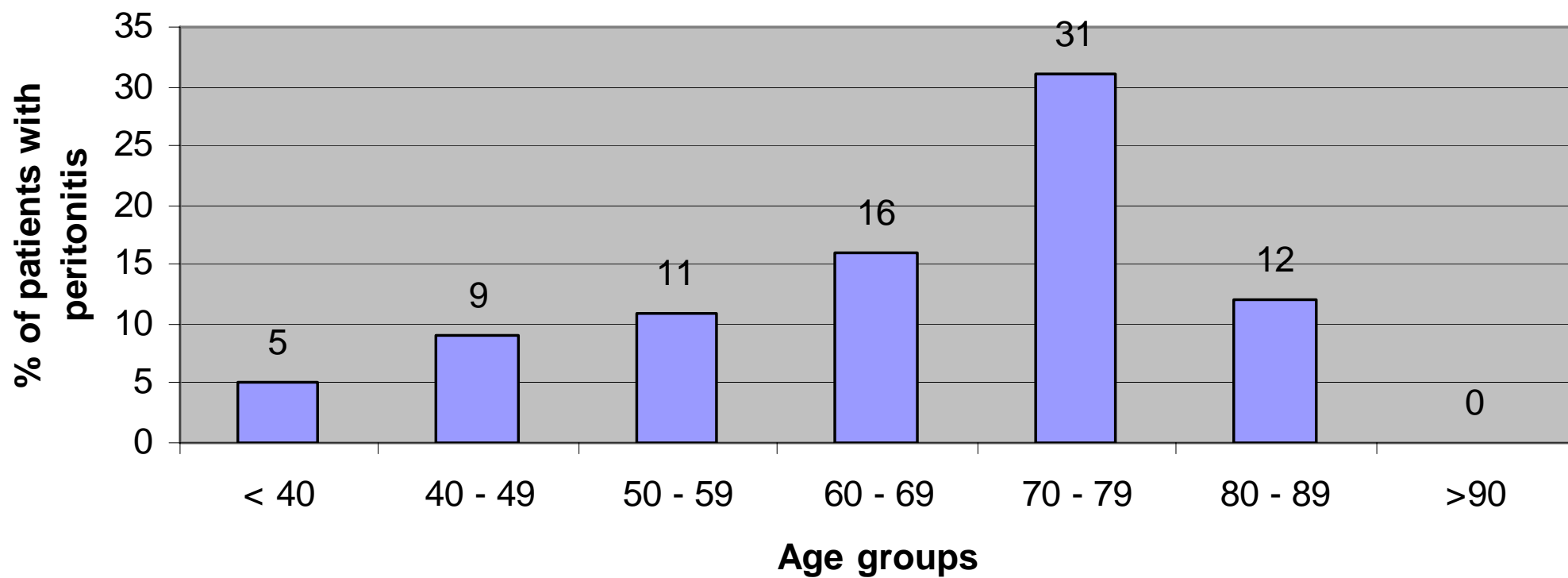
Modalities All Patients And Patients With Peritonitis in 2006



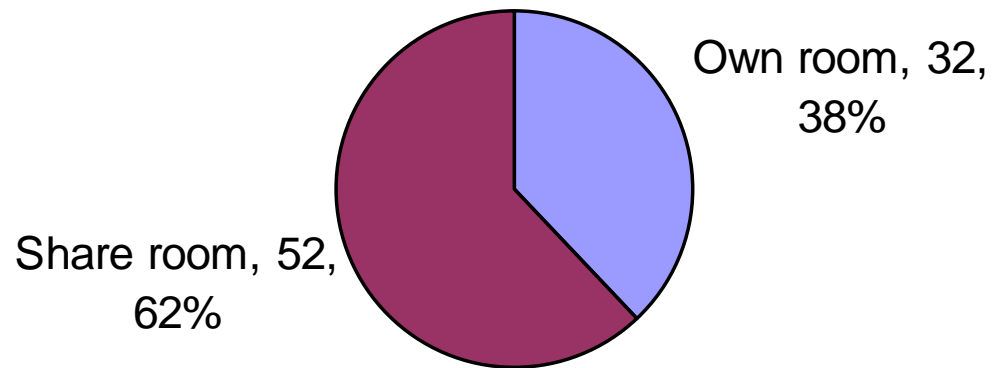
DM And Non-DM Patients With Peritonitis In 2006, n = 84



Age Groups Of Patients With Peritonitis In 2006, n = 84



Accommodations Of Patients With Peritonitis In 2006, n = 84



Possible Theories?



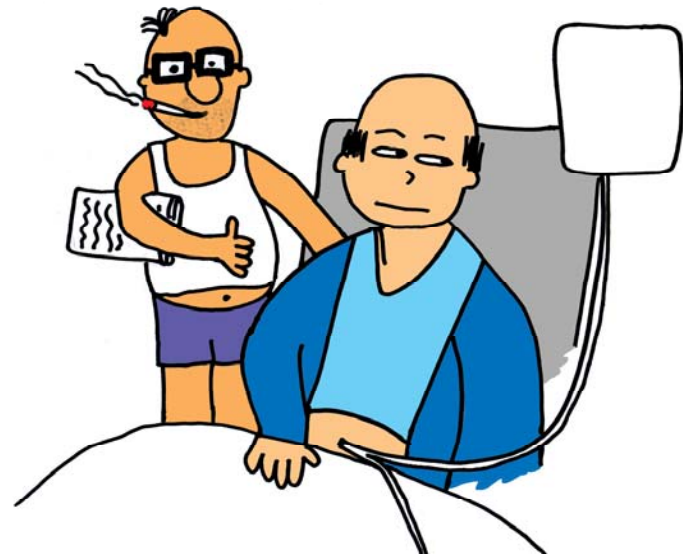
Why Monday? ... 1

- Deliberate delay
 - Waiting till Home PD unit is open
 - Avoiding Emergency department
- Change in focus
 - Social events impacting patient compliance and technique



Why Monday? ...2

- Change in the caregiver during the weekends



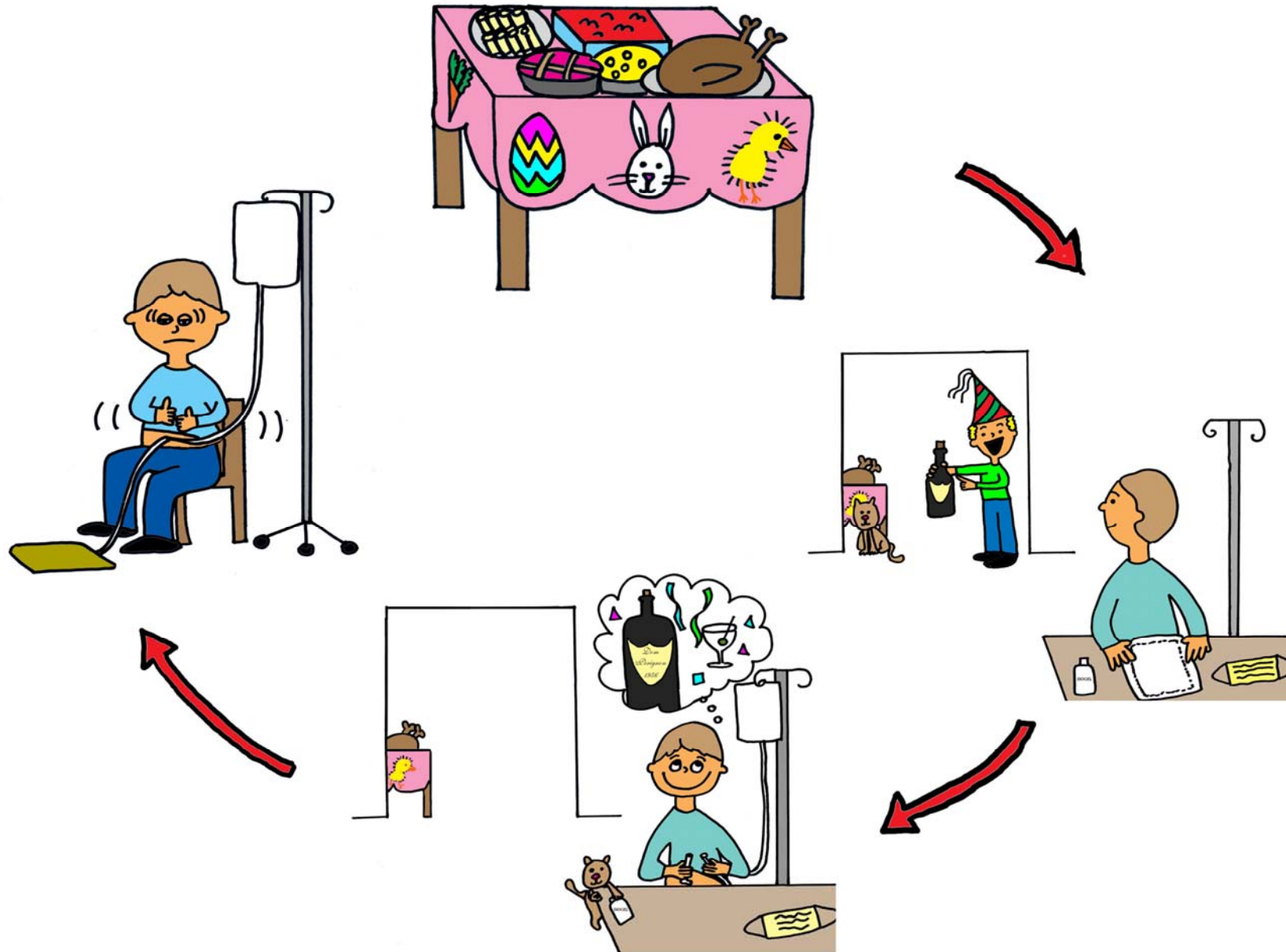
Months Of The Year

“Things to do...

Places to see”



During festivities, patients become distracted easily



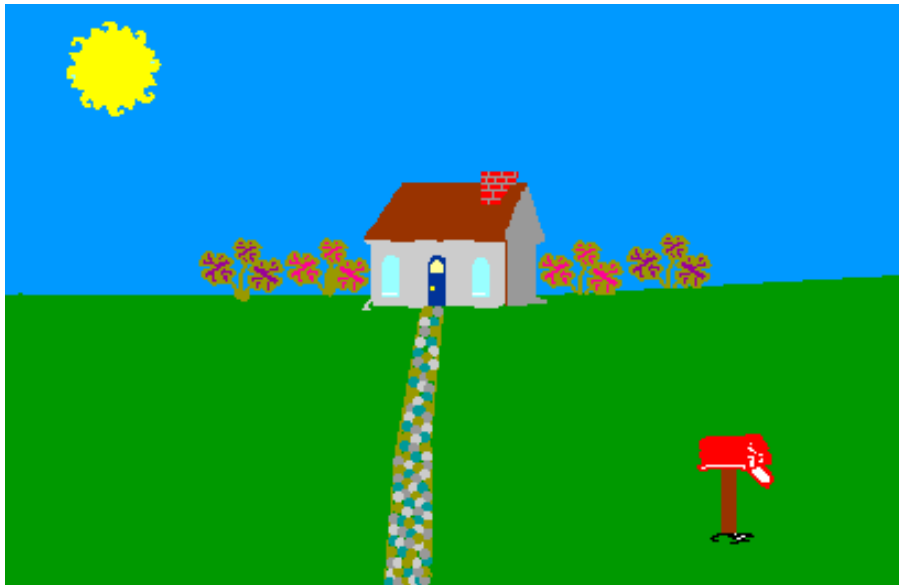
Summer Time ...₁

Change of caregiver: Primary caregiver on vacation



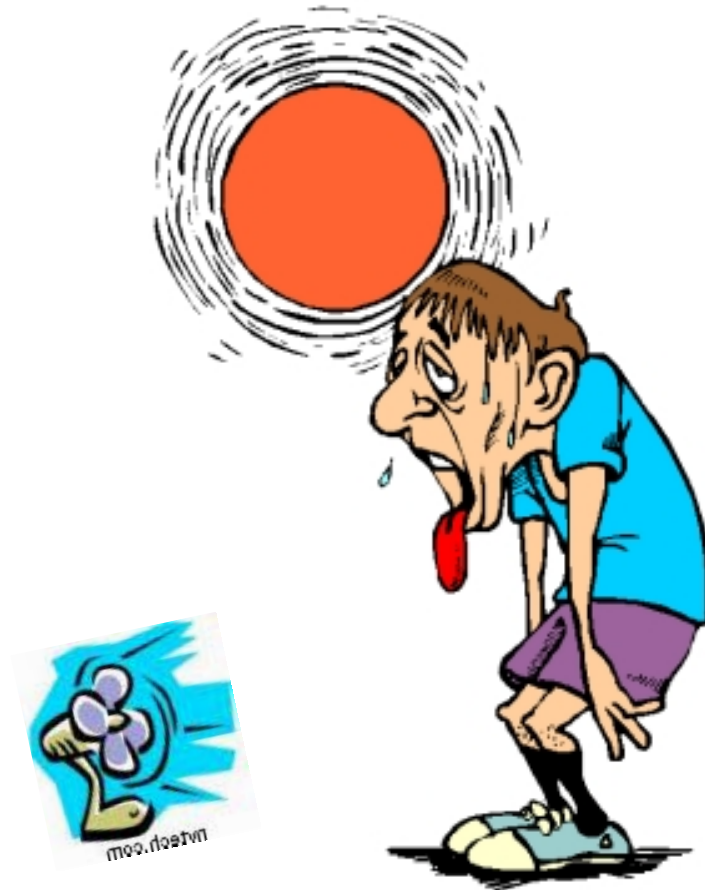
Summer Time ...2

Dialysis in a different place



Summer Time ...3

“Too hot to bother”



Exit Site Care

- Most common organism: *S. aureus*
- Ineffective handwashing
- Poor cleaning technique
- Performing exit site care in the bathroom
- Reducing frequency of exit site care



Men vs Women



- Varied results
 - 2006: higher % of men with peritonitis
 - 2005: higher % of women with peritonitis
- Further data collection required

Shared Room

- Sharing bedrooms and family rooms increases exposure to bacteria
- More likely to have other people going in & out of room



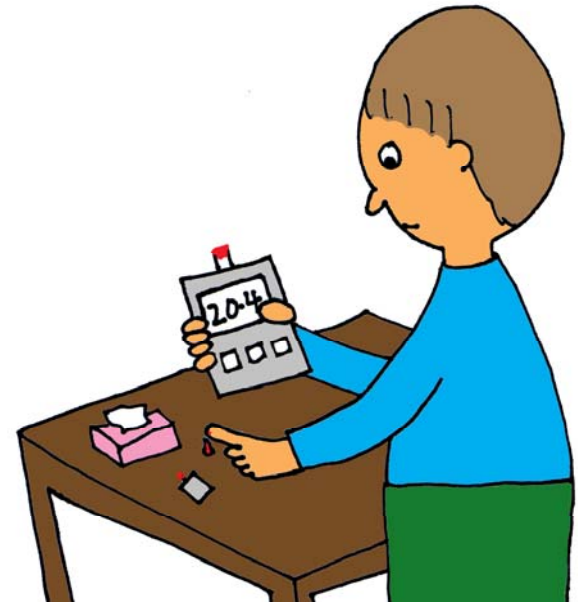
Modality

- CAPD therapy: more frequent opening of the system increases the risk of contamination



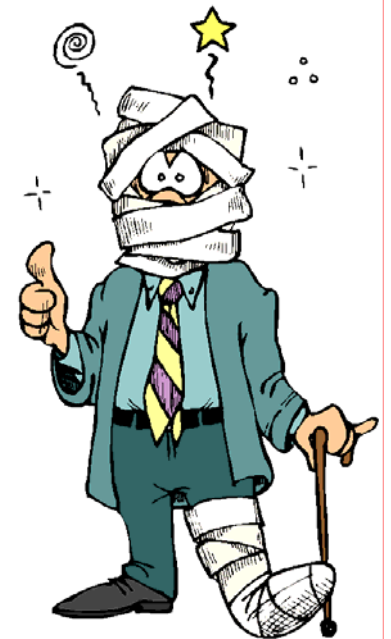
Diabetic vs. Non Diabetic

- The incidence of peritonitis in diabetics patients on PD appears to be higher
- The immunity of diabetics is decreased
- More susceptible to infection

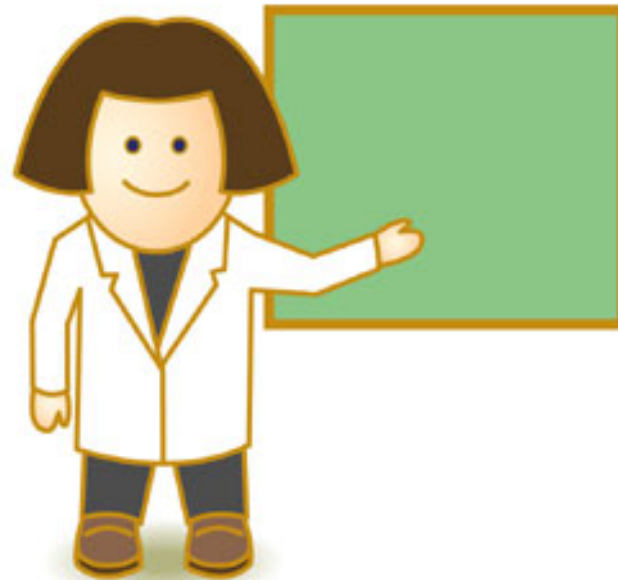


Age

- Increased age:
 - Decreased vision
 - Decreased manual dexterity
- More likely to contaminate during exchange
- The impact of medical conditions in the elderly may be dramatic



How Can We Change Our Teaching With This Information?



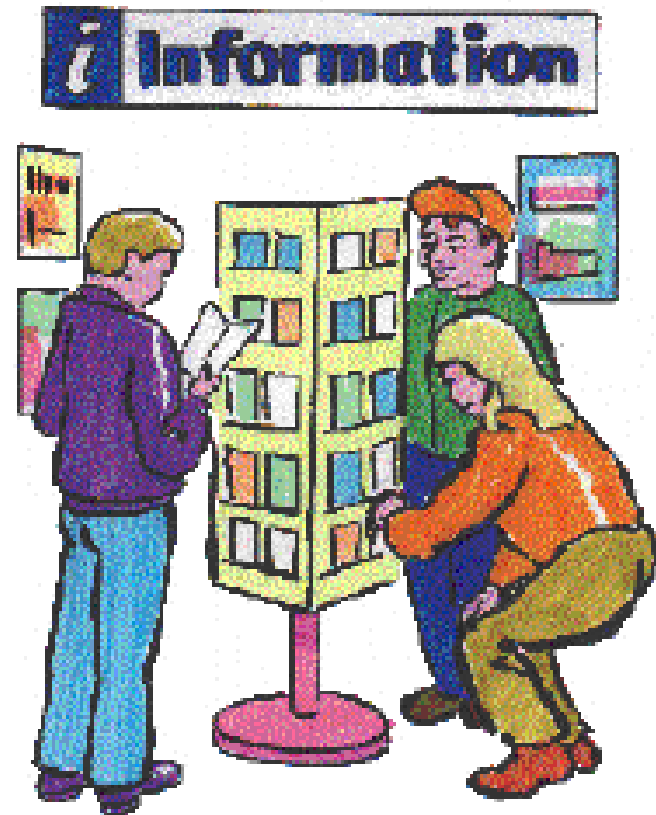
Teaching ...1

- Retraining:
 - Patient
 - Caregiver
 - Homecare nurse



Teaching ... 2

- During clinic appointment waiting time:
 - Review quiz/puzzles
 - Videos / DVD
 - Reading materials



Teaching ... 3

- Posters
- Poster Boards

PERITONITIS KILLS...

KILLS YOUR PERITONEAL MEMBRANE

- Peritonitis damages your filtering membrane
- Your dialysis will become less effective - you will feel sick



KILLS YOUR WALLET AND YOUR DIALYSIS CLINIC

- Antibiotics are VERY EXPENSIVE - it is taxpayers' money and your money
- Antibiotics and supplies put a strain on the hospital budget
- You come to the hospital for treatment, you pay for the traveling and parking costs



HANDWASHING



KILLS THE EFFECTIVENESS OF ANTIBIOTICS

- Repeated use of antibiotics can lead to creation of SUPERBUGS



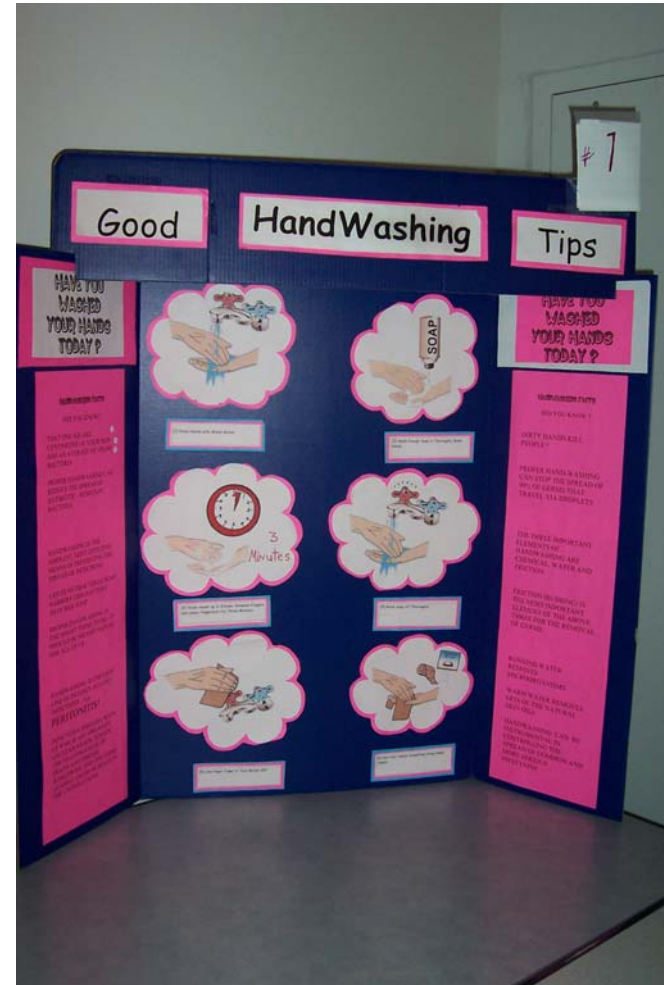
KILLS YOUR CATHETER

- If you have frequent episodes of peritonitis, the doctor will have to remove your catheter



Teaching ... 4

- Peritonitis Workshops
 - Target peak months
 - Signs & Symptoms
 - Handwashing
 - Connectology
 - Exit site care



Peritonitis Workshop



CARE OF CATHETER ... CHECK

The catheter and transfer set should have no:

- Cracks
- Splits
- Tiny holes

Make sure the catheter / transfer set connection is tight.

Be sure your nurse changes your transfer set every 6 months.

CARE OF THE EXIT SITE ... FEEL the tunnel ...

- Skin over catheter tunnel should not feel sore, tender, or hard
- It should not appear red or swollen

CARE OF EXIT SITE ... LOOK

Exit site should not be:

- red
- painful
- swollen
- leaking

Infections can lead to ...

CATHETER AND EXIT SITE CARE

WASH AND DRY YOUR HANDS THOROUGHLY ... prior to starting your catheter and exit site care.

REMEMBER ...

- Secure the catheter to your skin
- Do not pull or twist your catheter
- Never use scissors near catheter
- Have good personal hygiene
- Take shower, avoid bath
- Keep exit site clean and dry
- Leave crust and scabs in place to heal

WHEN TO CALL YOUR NURSE

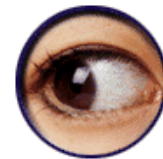
Call immediately if:

- Exit site is red, painful or draining.
- Skin over catheter tunnel is red, sore, tender or swollen.



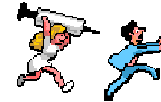
Teaching ...5

- Home Visits :
 - Q 6 months & after peritonitis
 - Observe patient technique in own environment
 - Pay attention to shared room
 - Encourage no visitors during exchange



Teaching ...6

- Home Visits:
 - Follow up PRN with “repeat offenders”
 - Emphasize appropriate place for exchange and exit site care



Teaching ...7

“DON’T WAIT TIL MONDAY”

- Importance of early reporting
- Go to E.R. during “Off Hours”



Teaching ... 8

Especially in summer time:

- Good personal hygiene, shower every day
- Do exit site care daily
- Do not use non chlorinated or well water to wash exit site
- Do not swim in lakes
- Do not take short cuts when doing exchanges



Practice

- Routinely review exit site with each peritonitis episode
- Assess patient technique after medical illnesses
- Involve other disciplines
- Dialogue with patient



Conclusion

- Tracking peritonitis rates lead to change in our teaching practices
- “Useless information” becomes “Useful information”
- Ultimately, increase the longevity of peritoneal membrane



References

- Bowe, D., & Khaodhjar, L. (2005). Using CQI strategies to improve and simplify IV iron and anemia management: a dialysis facility's experience. *Nephrology Nursing Journal*, 32, 535-543.
- Piraino, B., Bailie, G.R., Bernardini, J., Boeschoten, E., Gupta, A., Holmes, C., Kuijper, E.J., Li, P.K.T., Lye, W.C., Mujais, S., Paterson, D.L., Fontas, M.P., Ramos, A., Schaefer, F., and Uttley, L. (2005). ISPD guidelines / recommendations: Peritoneal dialysis-related infections recommendations: 2005 update. *Peritoneal Dialysis International*, 25, 107-131.



THANKS

Questions?

