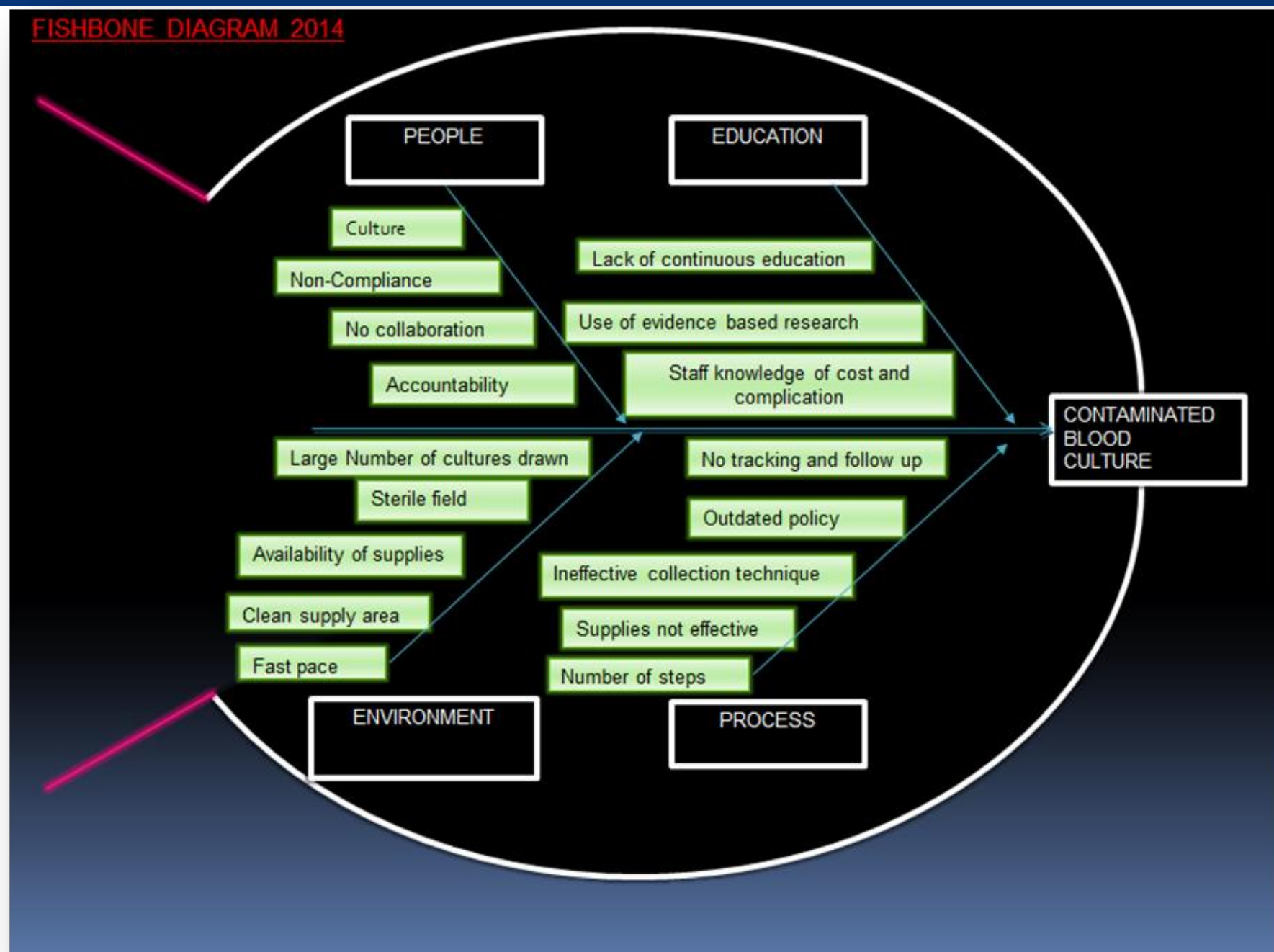




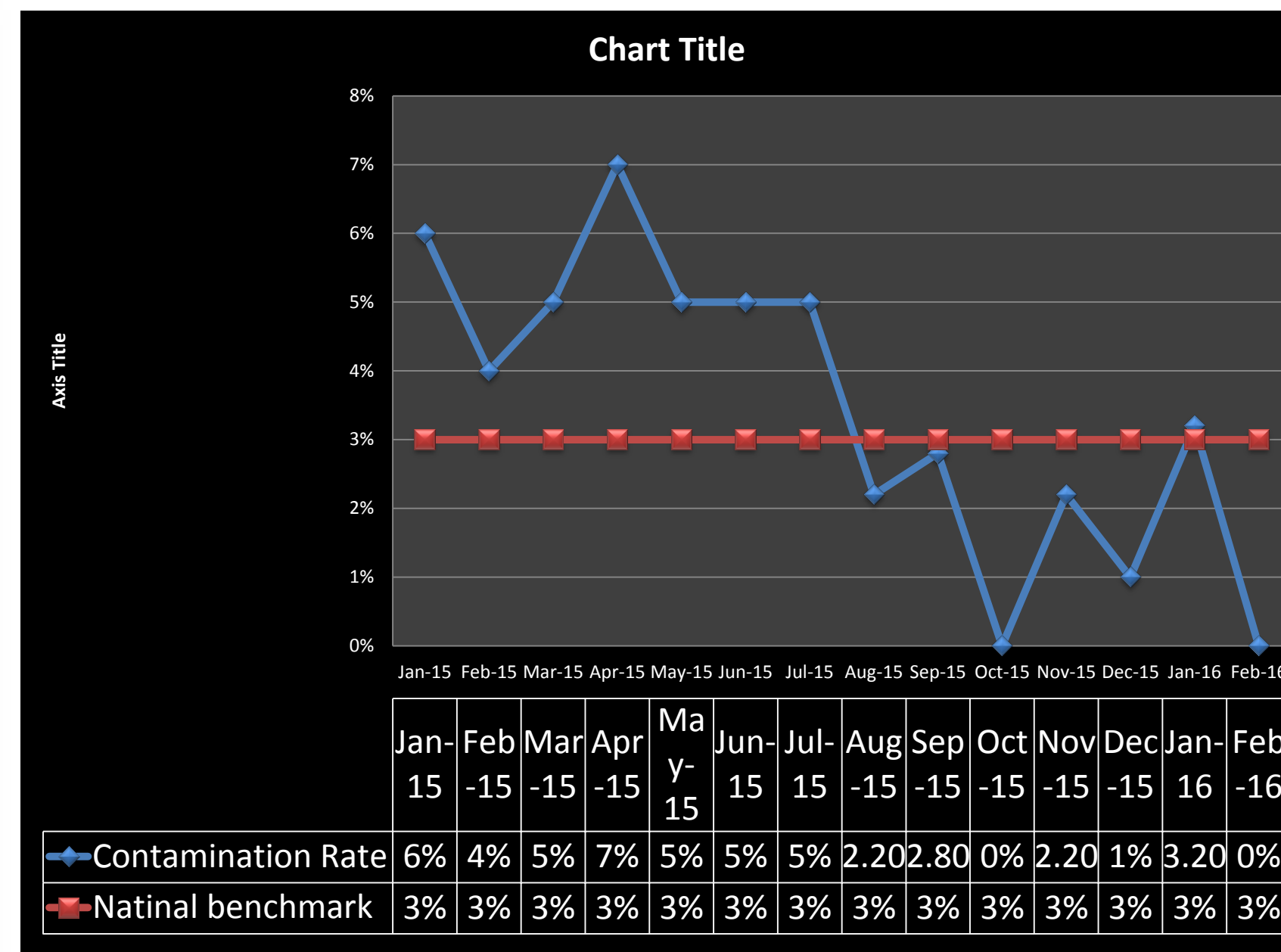
Blood Culture Contamination Green Belt Project

Define



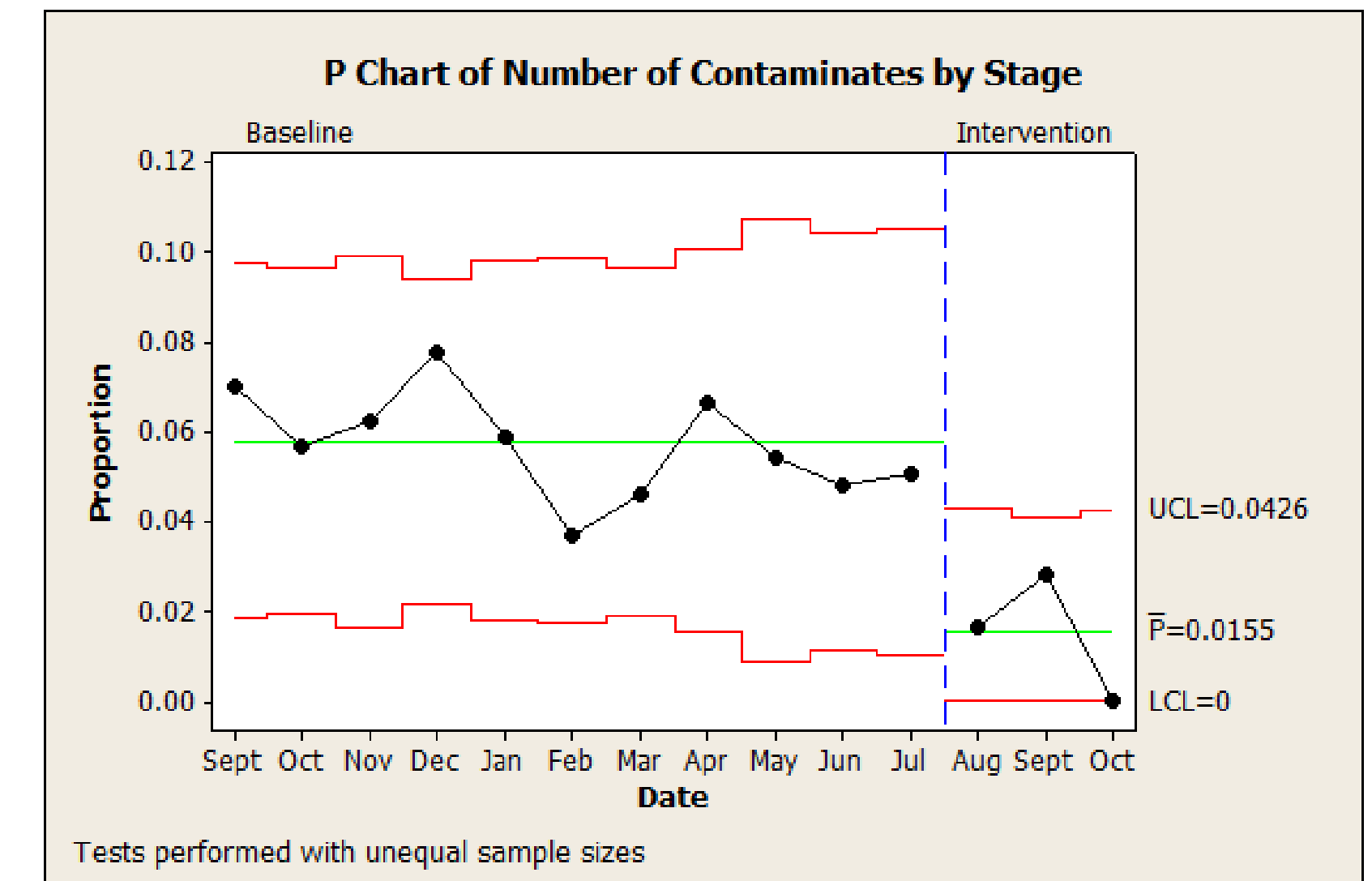
- Contaminated blood cultures above national benchmark of <3 percent
- Root causes:
 - Contaminated supplies
 - Break in technique, too many steps
 - Fast pace unit
 - Lack of Education

Measure



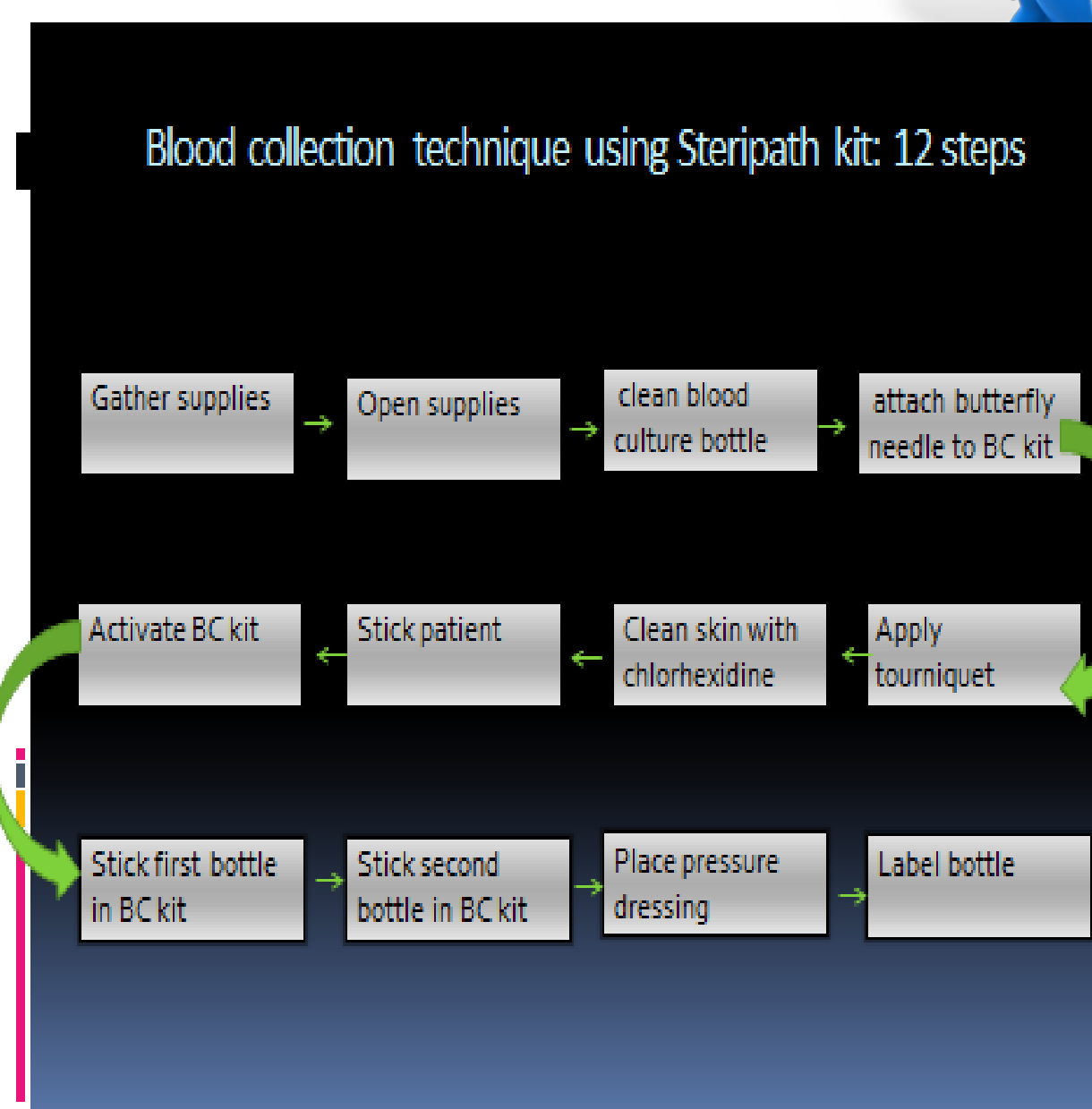
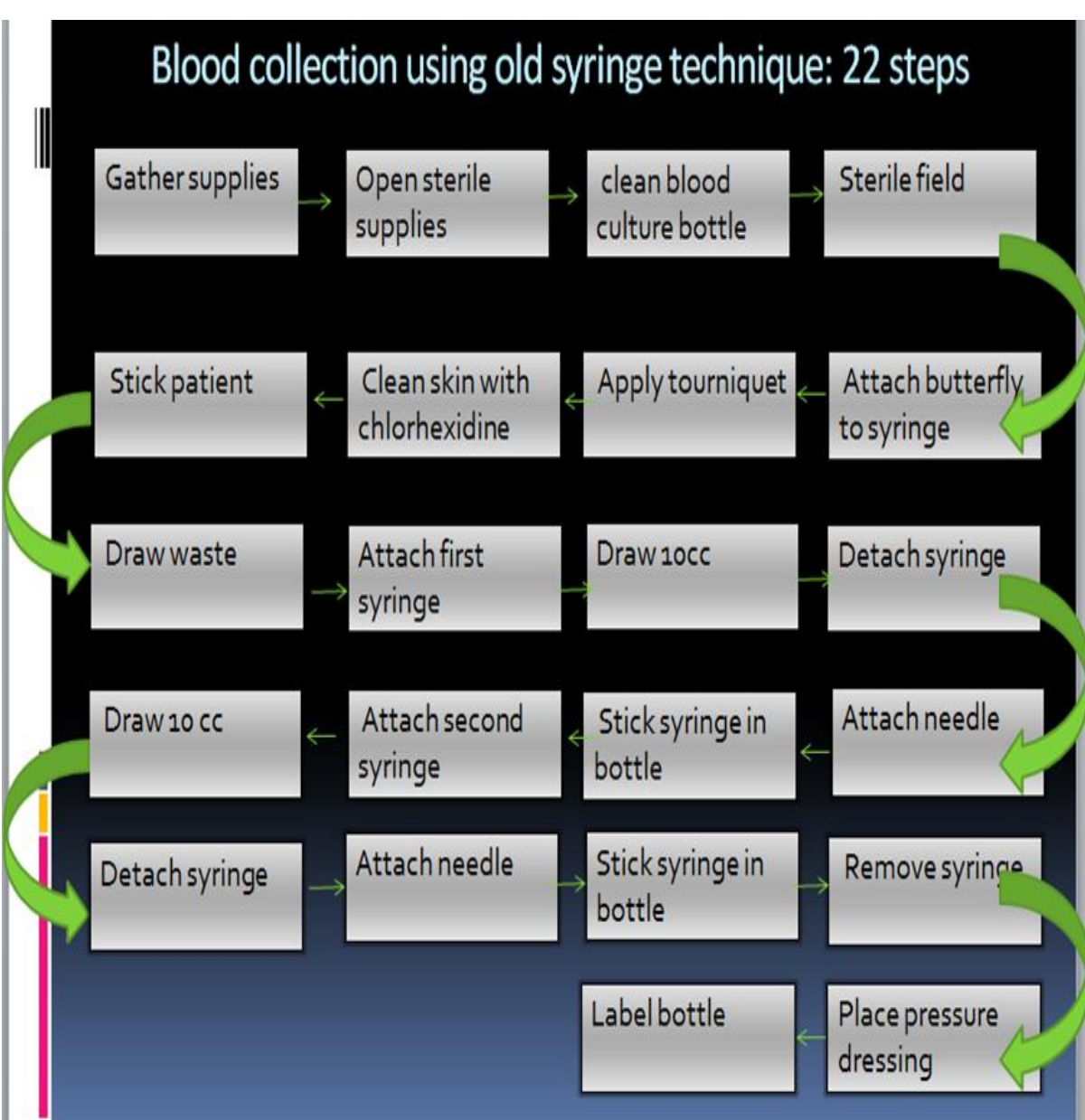
- Tracking of monthly blood culture contamination and identifying staff needing education

Analyze



- Effectiveness of kits
- Identifying barriers
- Strengthening champions
- Incorporating in orientation

Improve



- Reducing steps from 22 to 12 steps, improving the collection technique
- Transparency and involvement of staff
- Empowerment and accountability of staff
- Management involvement
- Collaboration and communication with other services: Microbiology, IPC, Management

Control

SUSTAINING MEASURES	TASK	CHAMPION RESPONSIBILITY
BLOOD CULTURE KIT SUPPLY	Logistics supply PAR level of 30 Replenish BC kits in the locked carts (near the tube system)	Champions, management and CNL will ensure adequate supply of kits. When ordering supply, IMP(product number) will be used
TRACKING EFFECTIVENESS OF KITS	Write the "SP" on bottle when using the kit to monitor compliance and effectiveness of kit	All champions to remind and educate staff in writing "SP" on the bottle and explain the reason for using kits
RESOURCE PERSON FOR HARD STICK	Assigned resource person for hard stick patients	Champion to write their name on the white board at the beginning of shift
MONTHLY OR QUARTERLY MEETING: CHAMPION, CNL AND MANAGEMENT	Communication will be done through emails about issues, concerns and suggestions.	All champions are responsible to attend meetings First meeting Nov 25 th 2015 to discuss stocking and sustaining measures Next meeting Jan 26, 2016 to discuss sustaining measures
TRAINING OF NEW STAFF AND CURRENT STAFF	Training new staff and retraining of current staff	Greg Cooley volunteered to do the training-name of staff emailed to Greg monthly
TRANSPARENCY	Champions to update the blood culture poster monthly	All champions are responsible to write the contamination rate on the poster
CONTACT FOR ISSUES	Call CNL Rowena Samonte for any issues	Champions have CNL contact number
REVIEW OF POLICY	SOP- will be discussed if the improvement is sustained for 6 months, will revisit March 2016 Revision of competency checklist by SDS ongoing	Champions will meet March 2016 to revise the SOP Revision of competency checklist by SDS ongoing

- Blood culture contamination less than 3%
- ROI: cost saving of \$332,500 within 5 months
- Sustaining measures and roll out to Critical Care

Comparison Of Number Of Cultures Before And After Implementation

August to December 2014				August to December 2015: Using the Kits			
Month	Cultures	Contaminations	Rate	Month	Cultures	Contaminations	Rate
Aug	360	24	6.67%	Aug	180	4	2.22%
Sept	314	22	7.01%	Sept	213	6	2.82%
Oct	333	19	5.71%	Oct	187	0	0%
Nov	285	18	6.23%	Nov	232	5	2.16%
Dec	372	29	7.80%	Dec	178	2	1.12%
Total		112		Total		17	

Calculation of savings

- 112-17= 95 less contamination from August to December
- 95 x \$3500 (cost per contamination) = **\$332,500**

Based on FREDERICI, WEINBAUM, et. Al, "patients with false-positive blood cultures were reported to be more than 50% greater than those for similar patients with true-negative blood cultures. This was accounted for by increased length of stay and increases in pharmacy and laboratory charges, with an increase in total median charges of more \$4,000 per patient."

Based on Yuri F. van der Heijden, MD et. Al, "estimated that blood culture contaminants resulted in excessive therapy costs of about \$1,000 per adult hospitalized patient. Bates et al. reported an even larger difference in total charges between hospitalized adults with false-positive blood culture results and those with negative results (median, \$43,346 vs \$8,734)."