



Early challenges during the development and implementation of BioPath, a University of Florida Biohazards Medical Monitoring Program

*Bhavna Bhardwaj, *Karen Gillis, **Grace Dixon, ***Nahum Beard, *Gary Beaudry and *Philip Collis
 *Biological Safety, **Risk Management and ***Occupational Medicine Team, University of Florida, Gainesville, FL



Abstract

With an expansion of high containment laboratories at the University of Florida (UF), BioPath, a Medical Monitoring Program for employees, students, and affiliates with a potential for exposure to Risk Group 3 (RG3) and selected Risk Group 2 (RG2) agents was recently established. Here we outline development of the program as well as unexpected issues that surfaced during that process.

Introduction

Prior to BioPath, the Medical Surveillance Program at UF was less structured i.e. it consisted of various individual programs each requiring separate forms, oversight, costs, and visits to Student Health Care Center (SHCC) Occupational Medicine (OCCMED) Services. Unexpected challenges, some of which are discussed here, had to be overcome before implementing the all-inclusive program.

Methods/Implementation

To streamline occupational health oversight for persons working with RG3 and some RG2 agents, multiple meetings and conference calls took place between the UF Institutional Biosafety Committee (IBC), the OCCMED section of the SHCC, and the Biosafety Office (BSO). It resulted in creation of an integrated BioPath Medical Monitoring Program which includes:

1. All pre-exposure medical services
2. Recurrent medical monitoring and
3. Post-exposure response and treatment.

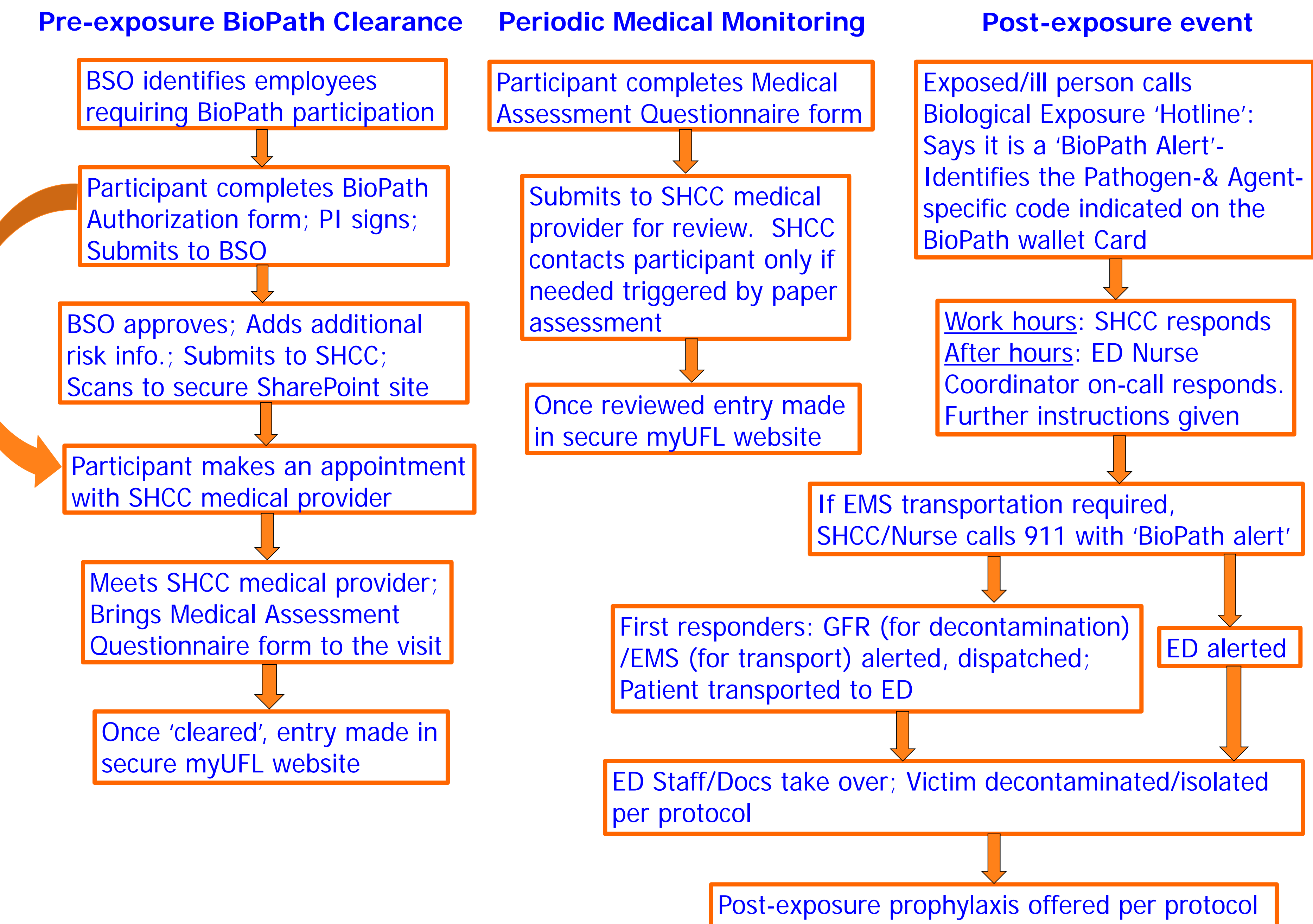
Under BioPath:

- Individuals with increased risk of exposure to a wide variety of pathogens had to be identified
- The individuals had to be medically monitored based on a consensus risk-assessment
- A comprehensive form had to be drafted to cover various essential services
- The cost for providing the services, and the entity responsible for covering the cost had to be identified
- The program had to include on-campus and off-campus containment laboratories
- The security related to Select Agent research had to be maintained
- Various responsible parties involved in pre- and post-exposure management had to be identified and trained
- Training drills reflecting various illness/exposure worst-case scenarios had to be developed and implemented

Results/Discussion

Issues	Solutions
Pre-exposure Medical Monitoring	
Consolidate separate programs, separate forms	Consolidated "umbrella forms" developed
Communication between Principal Investigator (PI), BSO, SHCC	Developed Authorization form
	Logistics of form submission (PI-BSO-SHCC) worked out
Who will cover the cost: Departments? Grants?	Delegated to the individual PI
Privacy protection for health assessment	Developed a separate BSL-3/2+ Biohazards Medical Assessment Questionnaire with direct submission to the SHCC Healthcare Provider; information confidential
Off-campus labs: health assessments locally?	Contacted local non-UF physicians, clinics, emergency rooms for services
Tracking participants 'cleared' for work through "BioPath"	Established secure database; access granted to limited persons
Periodic Medical Monitoring	
Frequency?	Annual re-evaluation/per OCCMED health provider recommendation
Reminders when next assessment is due...	Responsibility of the PI?
Who should authorize?	Health Assessment questionnaire form only, no face-to-face physician visit unless indicated by form info
	No BSO authorization necessary
	No SHCC appointment required
Cost involved	Lower cost if form review only
Post-exposure Event	
How to identify BioPath participants?	Developed BioPath Medical Alert wallet cards
	Established BioPath 'Biological Exposure Hotline' to manage biological exposure/illness calls
	Drafted exposure response plan; plan included in participant training program
Post-exposure prophylaxis	Arranged meetings with individual PIs to discuss specific treatment protocols
	Agent-specific protocols for various laboratories finalized by OCCMED medical provider
	Information (training, protocols, contact information) placed in secure website for ED (Emergency Department) docs who may need to treat a BioPath exposure
Identifying and training attending ED staff	Some existing staff is already trained. More training, and re-training planned
Ensuring availability of recommended drugs/vaccines	A few drugs/vaccines in stock. Complete verification in progress
Fine tuning of response	Involvement of first responders viz. 911, GFR (Gainesville Fire Rescue), Hazmat, ACFR (Alachua County Fire Rescue), ED
	Meetings with senior officials overseeing each of the groups
	First responders provided list and location of high containment labs; agent information not disclosed for security purposes
Outline emergency response plan to transport an injured/exposed individual from on-/off-campus sites	Plans are still evolving but remain a challenge
	Classroom education/training of each of the groups
	Hands-on drills to evaluate emergency response

Current Protocols



Conclusions

An inclusive and comprehensive BioPath program is now in place at UF. However, the program is still evolving. We keep facing new challenges which we continue to resolve these. Our goal remains to protect the health of individuals who have a potential for direct work-related exposures, the first responders, their colleagues and family, the community, and the environment.

Ongoing/Future Challenges

- Tracking BioPath 'clearance' and reminders for annual renewal
- Identifying a "team" of "key" first-responders and ED attending staff/docs, given the frequent staff turnover
- Identifying the best access routes to the emergency site for first responders in various BSL-3 facilities
- Developing post-exposure BioPath response for individuals living in off-campus locations e.g. in another county or city
- Developing and instituting training and drills for laboratory and ED personnel and first responders
- Policy issues:
 - Requirement for serum banking and vaccines
 - Verifying that all essential/recommended post-exposure drugs/vaccines are in-stock in the ED
 - Vaccines: Ability to decline?
 - Clearances/work restrictions based on potential exposure (i.e. PI, active laboratory personnel, visitor, inspector, maintenance staff etc.)
 - Physician briefing on termination of employment

