

Data is Coming:

Universal Newborn Hearing Screening (UNHS) Warehouse Project for Hospitals to View Hearing Screening Records

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Overview

- Learning Objectives
- Background & Goals
- Initial Steps & How to Begin
- Daily Process
- Final Result & Demonstration



Learning Objectives

- 1. Describe the benefits and reasoning for implementing a similar project in your jurisdiction
- Describe the project management process by providing suggestions for basic steps to development and ABC's of navigating IT
- 3. Describe methods to identify potential roadblocks to the development of a similar project in your jurisdiction



Background

- Quarterly Hospital Reports
 - Contained list of infants born at their hospital (1) screening results
 of infant, (2) if the infant was not screened, (3) reasons for not
 screening, and (4) totals of screening information
- Gives hospitals a chance to review information and correct data errors, however <u>many</u> limitations
 - Time consuming for ODH staff, inaccurate data, lacks additional information hospitals want & children's hospitals not included



Improvement Goals

 Hospital autonomy, by allowing hospitals to check and review data they are submitting to ODH at any point in time

Data will match exactly what ODH has through our various submission routes

 Hospitals will have more information on each child and aggregate data for their hospital overall



Initial Steps

- Proposal suggestions:
 - Use what's already there: building within an existing IT structure with other warehouse data
 - Vital Statistics data, cheaper, IT knowledge base increase
 - Keep the project as simple as possible to start: what is simple to us, is not simple to Information Technology Staff (ITS)
 - Make a proposal to include a prioritize list of your goals, including data fields and reports you want



Project Beginnings

- First meetings: Explaining UNHS the entire process from birth of baby to age 3
 - What is a hearing screening?
 - What is a diagnostic evaluation?
 - What is Early Intervention?
 - Different types of equipment?
 - What does pass/refer mean?
 - What happens when a baby is not screened?
 - How we get all of this information (Vital Statistics vs Paper vs Audiologists)?
 - Why all of this matters!



Project Beginnings Continued

- Discuss how current data system works and what it is
 - Hi*Track is specialized program for EHDI data
 - ODH staff brought together Hi*Track team in Utah, ODH ITS who regularly work with Hi*Track, new warehouse development ITS and program staff

 Explained current reports and information given to hospitals and how we see new system



Daily Process

- Sprints: 2 week plan with ITS on what to accomplish
 - Planning meetings at the beginning of each Sprint
 - Review meetings at the end of each Sprint
 - Daily 15 minute update meetings ("Stand-Ups")
- Goal of Sprints is to break down things into smallest possible steps
 - Might take a couple Sprints to display one type of data in warehouse



Daily Process Continued

- Implemented Plan-Do-Study-Act throughout the process with every new change
 - Planned out any small developments and changes
 - Tested it multiple times by multiple people
 - Discussed possible changes and how could impact other components
 - Decided on modifications and how to move forward



Roadblocks/Things to consider

- Regular IT personnel for UNHS may not be who works on project
- Already existing data problems that need to be fixed
- More than one screening per child for UNHS
- Current data doesn't match old data
 - Technology changes
 - Definitions change
 - Procedures change



What we learned

- Bring in <u>all the data</u> even if you don't plan to use it immediately
 - Future plans to expand access to Audiologists
 - Hospitals can see rates of children born/screened by them found to have hearing loss
- You are the project owner
- Testing, testing and then some more testing
- Patience and communication is key.



Project Results

 Data View: simplified list of babies born or screened at a facility so they can see individual level data

- Reports: developed two initial reports
 - Screening Report: summary data on number of screenings done and outcomes
 - Reasons for Not Screening Report: summary data for birth hospitals on multiple reasons for not screening child before discharge



Warehouse Weblink

https://odhgatewaytst.odh.ohio.gov/HomePage.aspx



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Hospital Hearing Screening

Category: Risk Factors
Latest Update: 2/20/2019
Description: Infant Hearing

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Details Data View Charts / Graphs Reports Downloads

This dataset is updated daily and contains data related to the universal newborn hearing screenings for Ohio children born in licensed birthing hospitals and licensed birthing centers from 2007 to present. The purpose of this Data Warehouse module is to allow Infant Hearing Screening data reported to the Ohio Department of Health more accessible medical professionals.

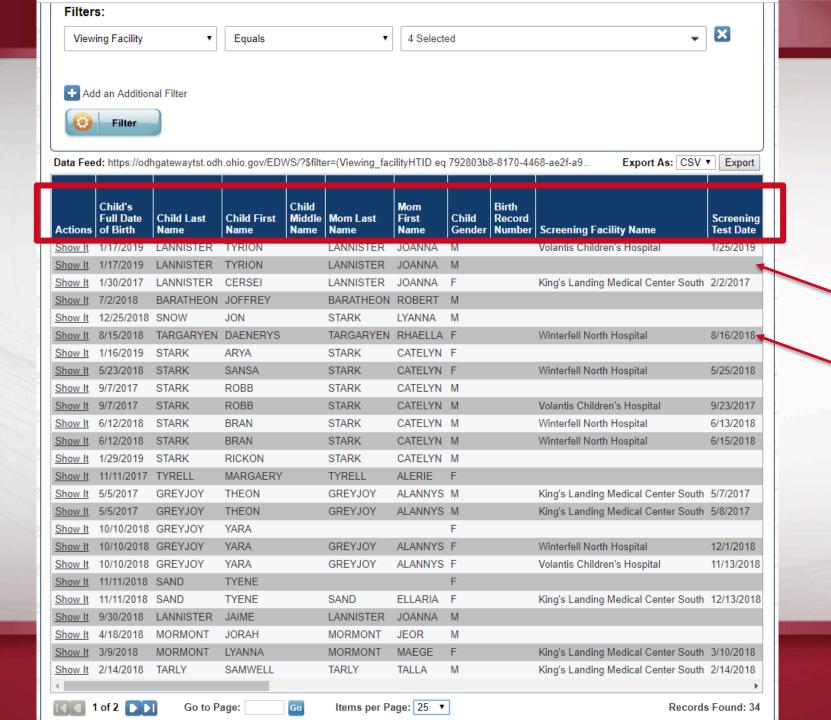
The <u>Infant Hearing Program's</u> goal is to ensure all newborns receive a hearing screening before hospital discharge. <u>Legislation</u> in Ohio requires all babies receive the hearing screening to find hearing loss risk or risk for hearing loss. Early identification of hearing loss allows for the baby to develop communication, language and/or speech skills. The time period for speech, language, and communication development is between birth and three years old. The earlier a child's hearing loss is identified or found, the earlier a child can begin developing communication skills.

Secure Ohio Public Health Information Warehouse Version 5.0



1/16/2010 STADIA





Rows are generated by screening result, birth without a screening or transfer without a screening.

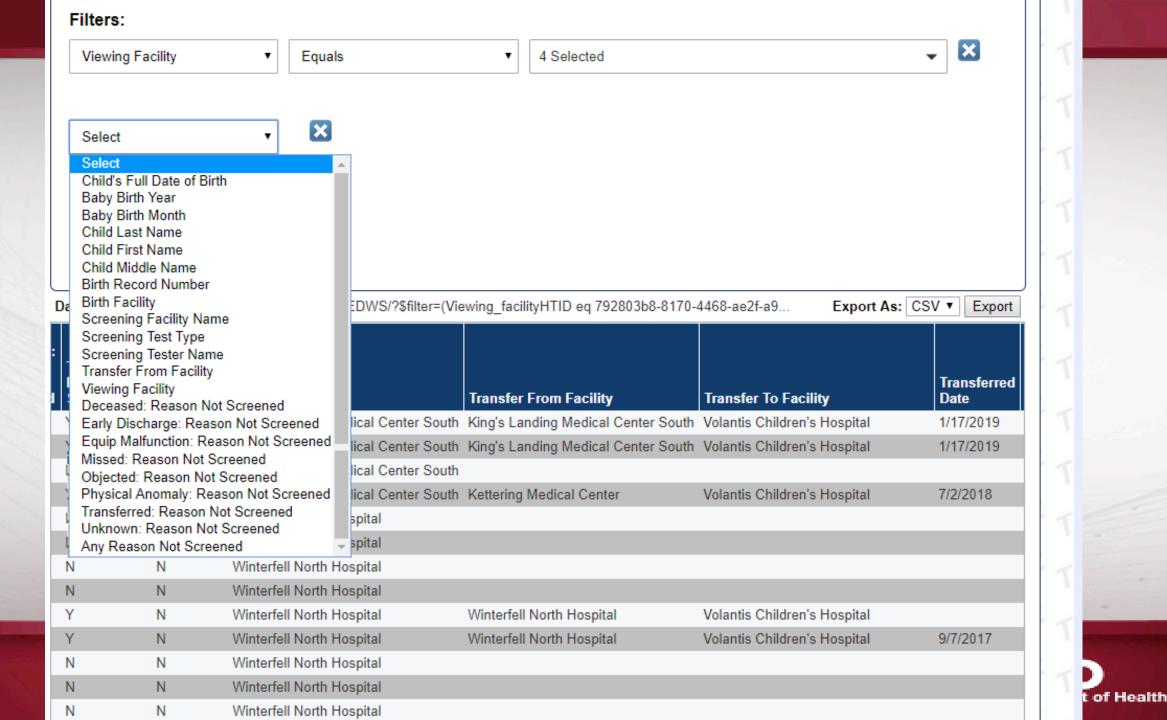


	Screening Test Date	Screening Test Type	Screening Right Ear Result	Screening Left Ear Result	Screening Tester Name	Deceased: Reason Not Screened	Early Discharge: Reason Not Screened	Equip Malfunction: Reason Not Screened	Missed: Reason Not Screened	Objected: Reason Not Screened	Physical Anomaly: Reason Not Screened
	1/25/2019	A-ABR	Pass	Pass	Giantsbane, Tormund	N	N	N	N	N	N
						N	N	N	N	N	N
South	2/2/2017	A-ABR	Pass	Pass	Spider, Varys	N	N	N	N	N	N
						N	N	N	N	N	N
						N	Υ	Υ	N	N	N
	8/16/2018	A-ABR	Pass	Pass	Tarth, Brienne	N	N	N	N	N	N
						N	Υ	N	N	N	N
	5/25/2018	A-ABR	Pass	Pass	Tarth, Brienne	N	N	N	N	N	N
						N	N	N	N	N	N
	9/23/2017	A-ABR	Refer	Refer	Giantsbane, Tormund	N	N	N	N	N	N
	6/13/2018	DPOAE	Refer	Refer	Tarth, Brienne	N	N	N	N	N	N
	6/15/2018	A-ABR	Refer	Refer	Tarth, Brienne	N	N	N	N	N	N
						Υ	N	N	N	N	N
						N	N	N	N	N	Υ
South	5/7/2017	TEOAE	Refer	Refer	Drogo, Khal	N	N	N	N	N	N
South	5/8/2017	A-ABR	Pass	Refer	Spider, Varys	N	N	N	N	N	N
						N	N	N	N	N	N
	12/1/2018	A-ABR	Pass	Pass	Tarth, Brienne	N	N	N	N	N	N
	11/13/2018	DPOAE	Refer	Refer	Giantsbane, Tormund	N	N	N	N	N	N
						N	N	N	N	N	N
South	12/13/2018	A-ABR	Refer	Refer	Drogo, Khal	N	N	N	N	N	N
						N	N	N	N	Υ	N
						N	N	N	Υ	N	N
South	3/10/2018	A-ABR	Pass	Pass	Spider, Varys	N	N	N	N	N	N
South	2/14/2018	DPOAE	Pass	Refer	Drogo, Khal	N	N	N	N	N	N

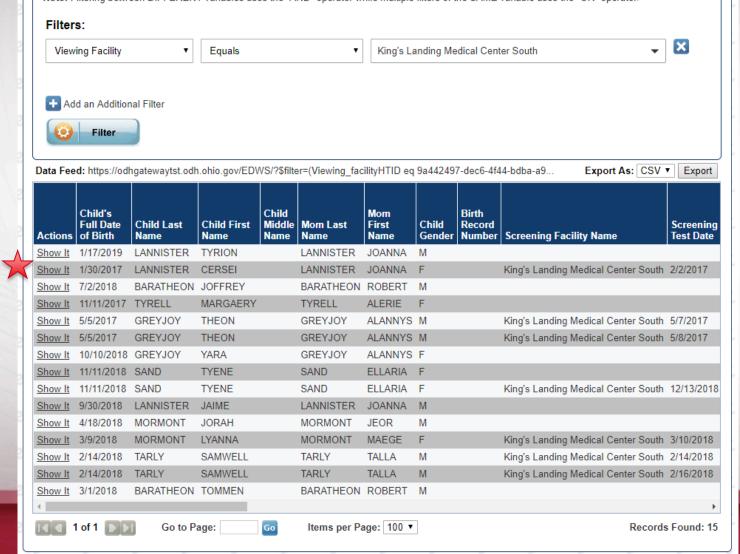
epartment of Health

Fransferred: Reason Not Screened	Unknown: Reason Not Screened	Birth Facility	Transfer From Facility	Transfer To Facility	Transferred Date
	N	King's Landing Medical Center South	King's Landing Medical Center South	Volantis Children's Hospital	1/17/2019
,	N	King's Landing Medical Center South	King's Landing Medical Center South	Volantis Children's Hospital	1/17/2019
I	N	King's Landing Medical Center South			
,	N	King's Landing Medical Center South	Kettering Medical Center	Volantis Children's Hospital	7/2/2018
I	N	Winterfell North Hospital			
l	N	Winterfell North Hospital			
I	N	Winterfell North Hospital			
l	N	Winterfell North Hospital			
′	N	Winterfell North Hospital	Winterfell North Hospital	Volantis Children's Hospital	
/	N	Winterfell North Hospital	Winterfell North Hospital	Volantis Children's Hospital	9/7/2017
I	N	Winterfell North Hospital			
I	N	Winterfell North Hospital			
l	N	Winterfell North Hospital			
I	N	King's Landing Medical Center South			
I	N	King's Landing Medical Center South			
I	N	King's Landing Medical Center South			
′	N	King's Landing Medical Center South			
′	N	King's Landing Medical Center South	Volantis Children's Hospital	Winterfell North Hospital	11/15/2018
′	N	King's Landing Medical Center South	Volantis Children's Hospital	Winterfell North Hospital	11/15/2018
′	N	King's Landing Medical Center South			
′	N	King's Landing Medical Center South	Volantis Children's Hospital	King's Landing Medical Center South	12/12/2018
I	N	King's Landing Medical Center South			
l	N	King's Landing Medical Center South			
,	N	King's Landing Medical Center South	King's Landing Medical Center South	Winterfell North Hospital	3/13/2018
I	N	King's Landing Medical Center South			

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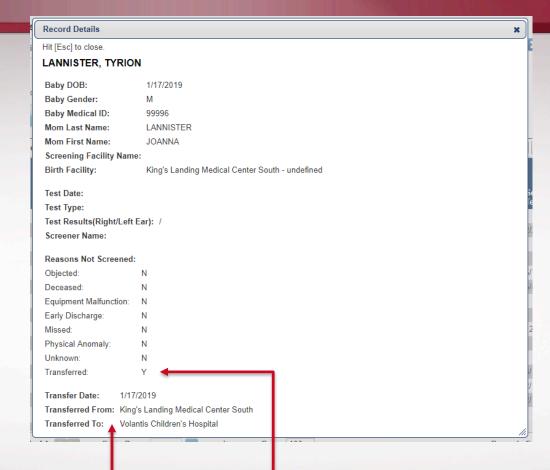
Birthing Facility





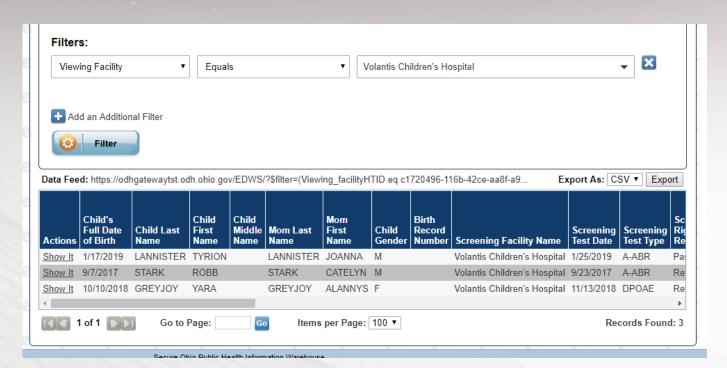
"Show It" gives summary of the particular screening information and baby information

Record Details Hit [Esc] to close. LANNISTER, CERSEI Baby DOB: 1/30/2017 Baby Gender: Baby Medical ID: 99997 Mom Last Name: LANNISTER Mom First Name: **JOANNA** Screening Facility Name: King's Landing Medical Center South King's Landing Medical Center South - undefined Birth Facility: Test Date: 2/2/2017 A-ABR Test Type: Test Results(Right/Left Ear): Pass/Pass Screener Name: Spider, Varys Reasons Not Screened: Objected: Deceased: Equipment Malfunction: Early Discharge: Missed: Physical Anomaly: Unknown: Transferred: Transfer Date: Transferred From: Transferred To:



If no screening done, shows indicators for why and potential transfer information





Children's Hospital

Transfer information shows the most recent transfer that occurred

Data Feed: https://odhgatewaytst.odh.ohio.gov/EDWS/?\$filter=(Viewing_facilityHTID eq c1720496-116b-42ce-aa8f-a9... Export As: CSV ▼ Export ysical iomaly: Unknown: Transferred: Reason Reason Not Transferred Screened Birth Facility **Transfer From Facility** Screened Transfer To Facility King's Landing Medical Center South King's Landing Medical Center South Volantis Children's Hospital 1/17/2019 Volantis Children's Hospital 9/7/2017 N Winterfell North Hospital Winterfell North Hospital N King's Landing Medical Center South Volantis Children's Hospital Winterfell North Hospital 11/15/2018 1 of 1 Records Found: 3 Go to Page: Items per Page: 100 ▼



Reports



"Screening Results" report can be run for any hospital

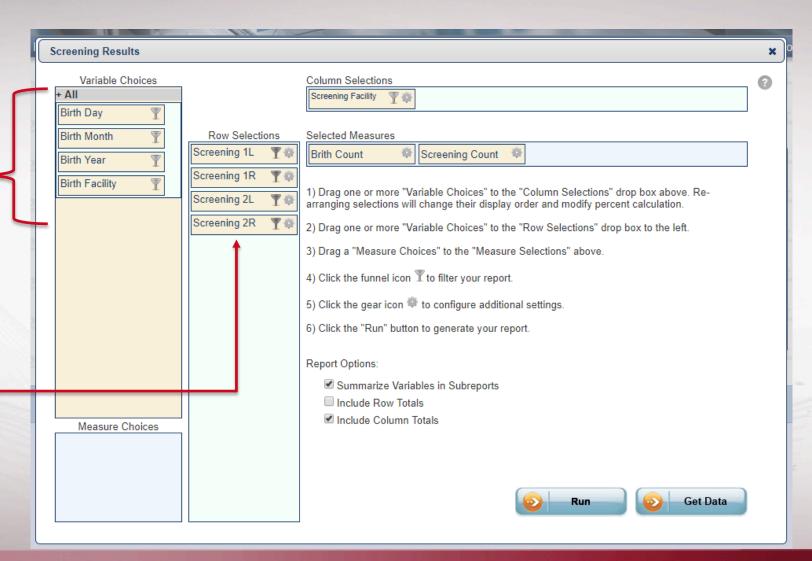
"Reasons for Not Screening" report is only applicable to Birth Facilities



Screening Results

Ability to filter by baby birth day, month, year and birth facility (mainly for Children's hospitals)

Includes screening results for 1st & 2nd screenings per ear







Screening Results

for Screening Facility = (Cincinnati Children's Hospital), Screening Result One for Left Ear = (Pass, Refer, Not Screened), Screening Result One for Right Ear = (Pass, Refer, Not Screened), Screening Result Two for Left Ear = (Pass, Refer, Not Screened), Screening Result Two for Right Ear = (Pass, Refer, Not Screened), Birth Year = (2016)

_				
Г	Screening Facility		Cincinnati Chil	dren's Hospital
ı	Screening Result One for Left Ear	Brith C	Count	Screening Count
	Pass	20)	67
	Refer	20)	53
	Total 20)	120

	Screening Facility	Cincinnati Chil	dren's Hospital
l	Screening Result One for Right Ear	Brith Count	Screening Count
	Pass	20	81
	Refer	20	39
	Total	20	120

Screening Facility Cincinnati Children's Hospital		dren's Hospital	
	Screening Result Two for Left Ear	Brith Count	Screening Count
	Pass	20	0
	Refer	20	0
	Total	20	0

Γ	Screening Facility	Cincinnati Chi	dren's Hospital
L	Screening Result Two for Right Ear	Brith Count	Screening Count
_	Pass	20	0
	Refer	20	0
	Total	20	0

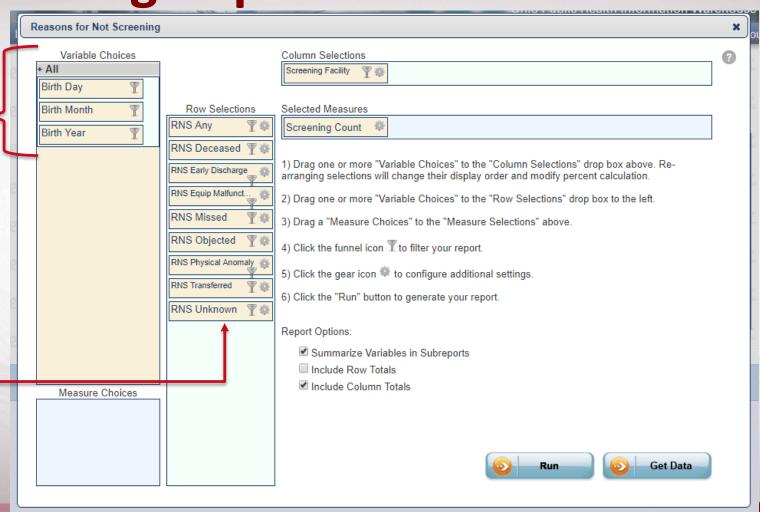
Shows "Birth Count" and "Screening Count" in order to show potential missed babies quickly (only birth facilities will have more births than screenings)



Reasons for Not Screening Report

Ability to filter by baby birth day, month, and year (report is only for Birth Facilities)

Includes all potential reasons for not screening marked on birth certificate records, as well as a calculated "Unknown" category if no reason was reported





Report Output

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Reasons for Not Screening

for Screening Facility = (Bethesda North Hospital), Birth Year = (2017)

Screening Facility	Bethesda North Hospital
Reason for Not Screening - Any Reason	Screening Count
No	5821
Yes	17
Total	5838

Screening Facility	Bethesda North Hospital
Reason for Not Screening - Deceased	Screening Count
No	5837
Yes	1
Total	5838

Screening Facility	Bethesda North Hospital
Reason for Not Screening - Early Discharge	Screening Count
No	5837
Yes	1
Total	5838

Screening Facility	Bethesda North Hospital
Reason for Not Screening -	Screening Count

Report Output

Screening Facility	Bethesda North Hospital
Reason for Not Screening - Early Discharge	Screening Count
No	5837
Yes	1
Total	5838

Screening Facility	Bethesda North Hospital
Reason for Not Screening - Equipment Malfunction	Screening Count
No	5835
Yes	3
Total	5838

Screening Facility	Bethesda North Hospital
Reason for Not Screening - Missed	Screening Count
No	5837
Yes	1
Total	5838

Screening Facility	Bethesda North Hospital
Reason for Not Screening - Objected	Screening Count
No	5838
Yes	0
Total	5838

Report Output

Screening Facility
Reason for Not
Screening Physical Anomaly

No 5838
Yes 0

Total 5838

Screening Facility	Bethesda North Hospital
Reason for Not Screening - Transferred	Screening Count
No	5827
Yes	11
Total	5838

Screening Facility	Bethesda North Hospital
Reason for Not Screening - Unknown	Screening Count
No	5835
Yes	3
Total	5838



Ohio EHDI Presentations

'The Ripple Effect from a Team Approach in EHDI'

Presenter: Reena Kothari, ODH Staff

Date: Tuesday, March 5, 2019

Time: 10:15 AM-10:40 AM

Room: Davinci A/B

'Developing a Statewide Protocol for Diagnostic Testing'

Presenter: Sheryl Silver, ODH Staff

Date: Tuesday, March 5, 2019

Time: 4:20 PM-4:45 PM

Room: Heathrow A/B

