State-Based Harmful Algal Blooms Surveillance: The Wisconsin Perspective

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Wisconsin Department of Health Services

Presentation Overview

- Describe the current Harmful Algal Blooms (HAB) program
- Discuss routes of exposure and typical symptoms
- Provide a summary of 2009, 2010, 2011 and 2012 health complaints and sampling results
- Describe integration with Environmental Public Health Tracking
- Opportunity for Questions

What is the HAB Program at DHS?

- Identify, evaluate and report cases of human and animal health events related to cyanobacteria in Wisconsin
- Develop outreach capacity to support case reporting and increase awareness of the health issues related to cyanobacteria
- Coordinate water sampling with regional DNR staff
- This project is supported by a cooperative agreement with the Centers for Disease Control and Prevention

CDC
Centers for Disease Control and Prevention

How Do We Learn About Illnesses?

- Direct contact with Division of Public Health (DPH) staff via e-mail or phone
- *Report a Case* through DPH website
  dhs.wisconsin.gov/eh/bluegreenalgae
- Wisconsin Poison Center (WPC) automated email case notification
- Department of Natural Resources (DNR), local public health or lake association referral

Blue-Green Algae -- Home Page - Windows Internet Explorer provided by DHS - State of Wisconsin

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http://www.dhs.wisconsin.gov/eh/bluegreenalgae/

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Blue-Green Algae

Harmful Algal Blooms Home	Understanding Algae	Health Concerns	Keeping Our Lakes Clean	Images of Algal Blooms	Resources and Links	Contact Us

Wisconsin's Harmful Algal Blooms Program

Wisconsin's Harmful Algal Blooms program collects information about human and animal illness and death resulting from exposure to blue-green algae. Tracking illness information will help the Wisconsin Division of Public Health measure the problem of blue-green algae in our lakes and rivers.

If you get sick after swimming in a Wisconsin lake or river, please report possible algae-related illness. This program does not provide medical treatment, so if you are experiencing severe symptoms seek medical attention immediately.

When in doubt, best keep out!

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Last revised: March 03, 2011

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Algal Bloom Exposure Report

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Algae-Related Illness Report Form

Please use this form to report a human or animal illness or death that you think was related to exposure to blue-green algae. If you have questions about this form, please call Dr. Lynda Knobeloch at 608 266-0923 or email her at lynda.knobeloch@wi.gov. Thank you for reporting this incident to us. We are working hard to improve the health of all Wisconsin residents and visitors.

1. Please enter today's date

mm/dd/yyyy

2. Please enter your name and address

Name

Street Address

City/township name, State, Zip

3. Are you reporting on a HUMAN or ANIMAL illness?

--None--

Done Internet 100%

Algae-Related Illness Report Form - Windows Internet Explorer provided by DHS - State of Wisconsin

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http://4.selectsurvey.net/DHS/TakeSurvey.aspx?SurveyID=92MJ4o82

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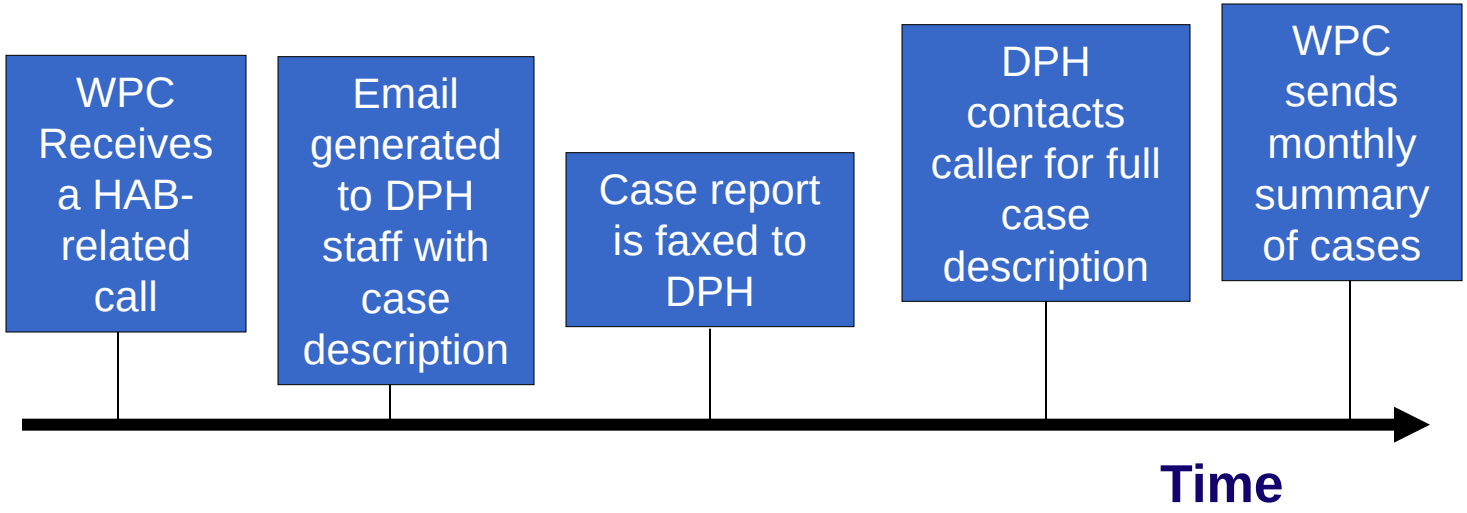
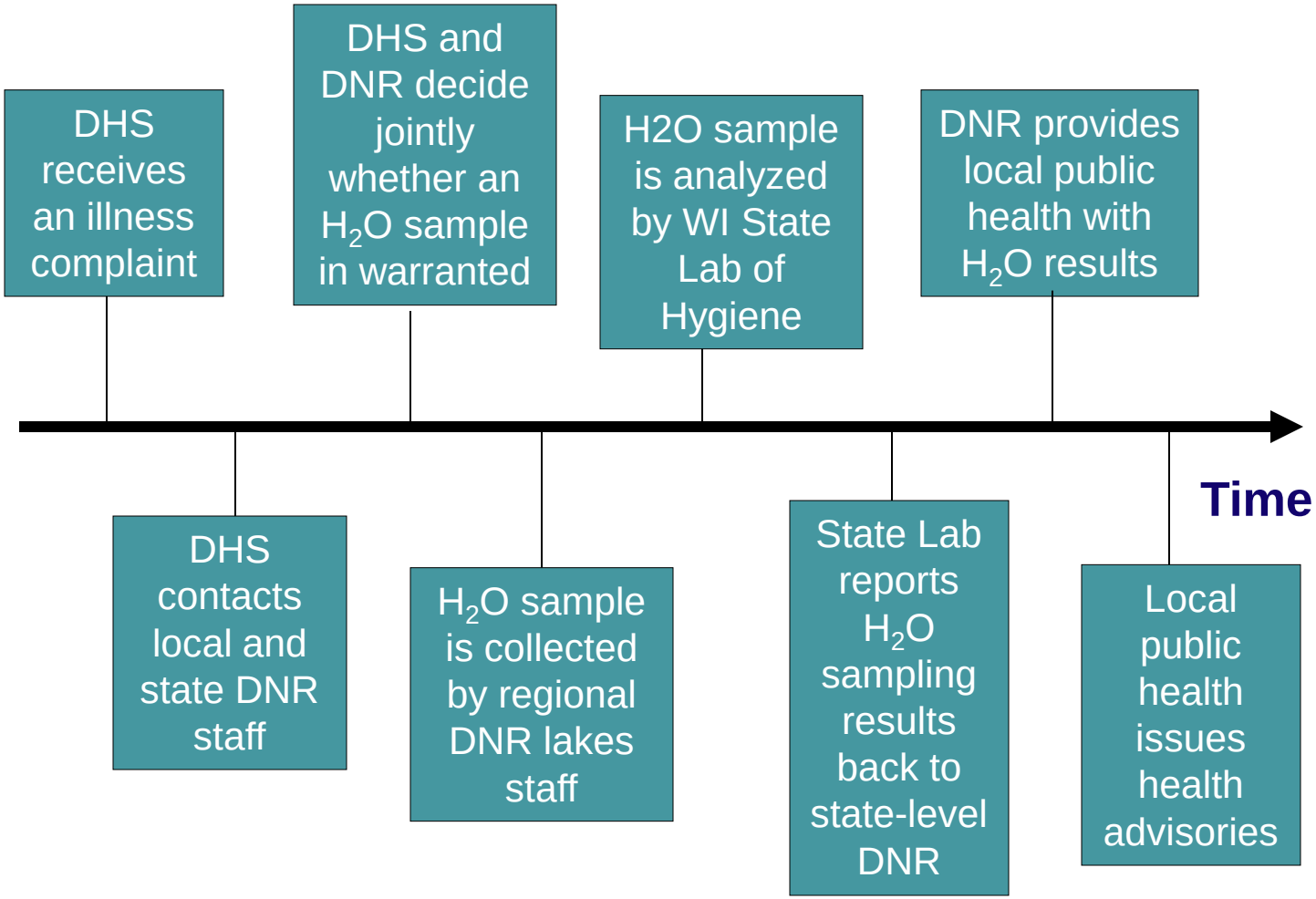
Done | Internet | 100%

Partnership with the WI Poison Center (WPC)



Response Timeline



Pre-beach season: H_2O sampling kits are "staged" at regional DNR offices throughout the state

Community Outreach

- Presentations at local, state and national public health events, local lakes associations, DNR lakes meetings
- Educational materials distributed at local and statewide events
- YouTube Video

Public Health Messaging

- Don’t swim where water is discolored or where you see foam, scum or algal mats
- Shower after swimming in lakes, rivers and ponds
- Keep pets out of soupy, green water or where you see foam, scum, or mats of algae
- If dogs swim in scummy water, rinse them off immediately - do not let them lick the algae off their fur
- Respect water-body closures and health advisories

Routes of Exposure

1. Skin Contact

Direct contact with algae-laden water can cause:

- **Rash**
- **Hives**
- **Skin blisters (especially on the areas under swimsuits)**

Routes of Exposure

2. Ingestion

Swallowing water where an algal bloom is present can cause:

- **Abdominal pain**
- **Diarrhea**
- **Vomiting**
- **Nausea**
- **Numb lips, tingling fingers and toes, or dizziness**

Cases of dog deaths often include salivation, weakness, difficulty breathing and convulsions

Routes of Exposure

3. Inhalation

Inhaling water droplets (either through irrigation or recreational activities) from water experiencing an algal bloom can cause:

- **Flu-like illness**
- **Respiratory Irritation (runny eyes and nose, a sore throat)**
- **Asthma-like symptoms**

Routes of Exposure and Case Reporting

- Dermal Contact: Direct contact with algae-laden water
- Inhalation: Inhaling water droplets (either through irrigation or recreational activities)
- Ingestion: Swallowing water where an algal bloom is present

Year	Health Complaints
2009	37 reports of illness (2 canine)
2010	27 reports of illness
2011	36 reports of illness
2012	33 (5 canine)

Symptoms	# of Reports
Dermal Rash	31
Respiratory Irritation	24
Gastrointestinal Distress	56
Cold/flu-like illness	37

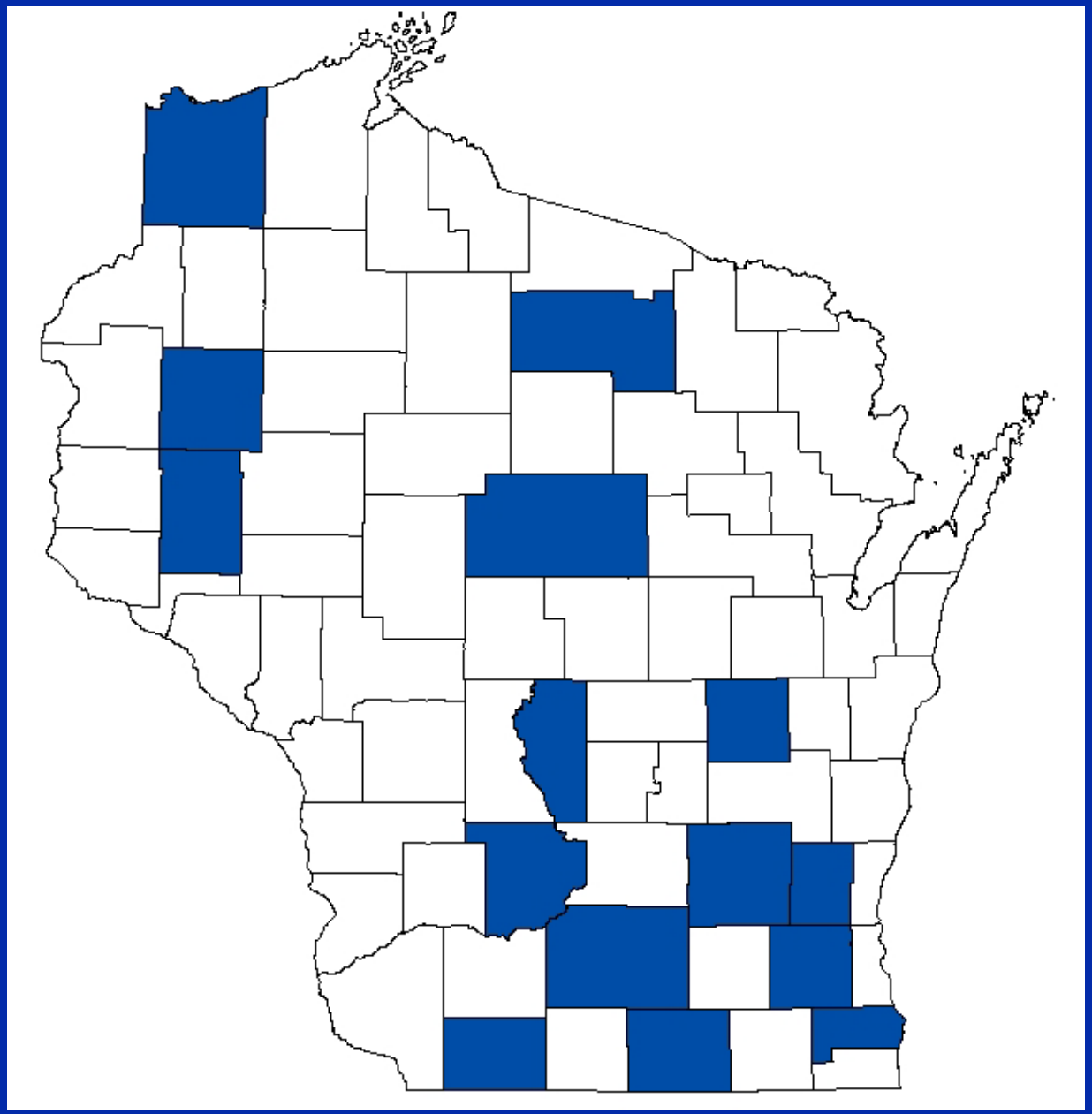
HAB Sampling Response

- DNR staff use standardized kits for sampling
- Non-standard samples have been received from DNR wardens and from veterinarians

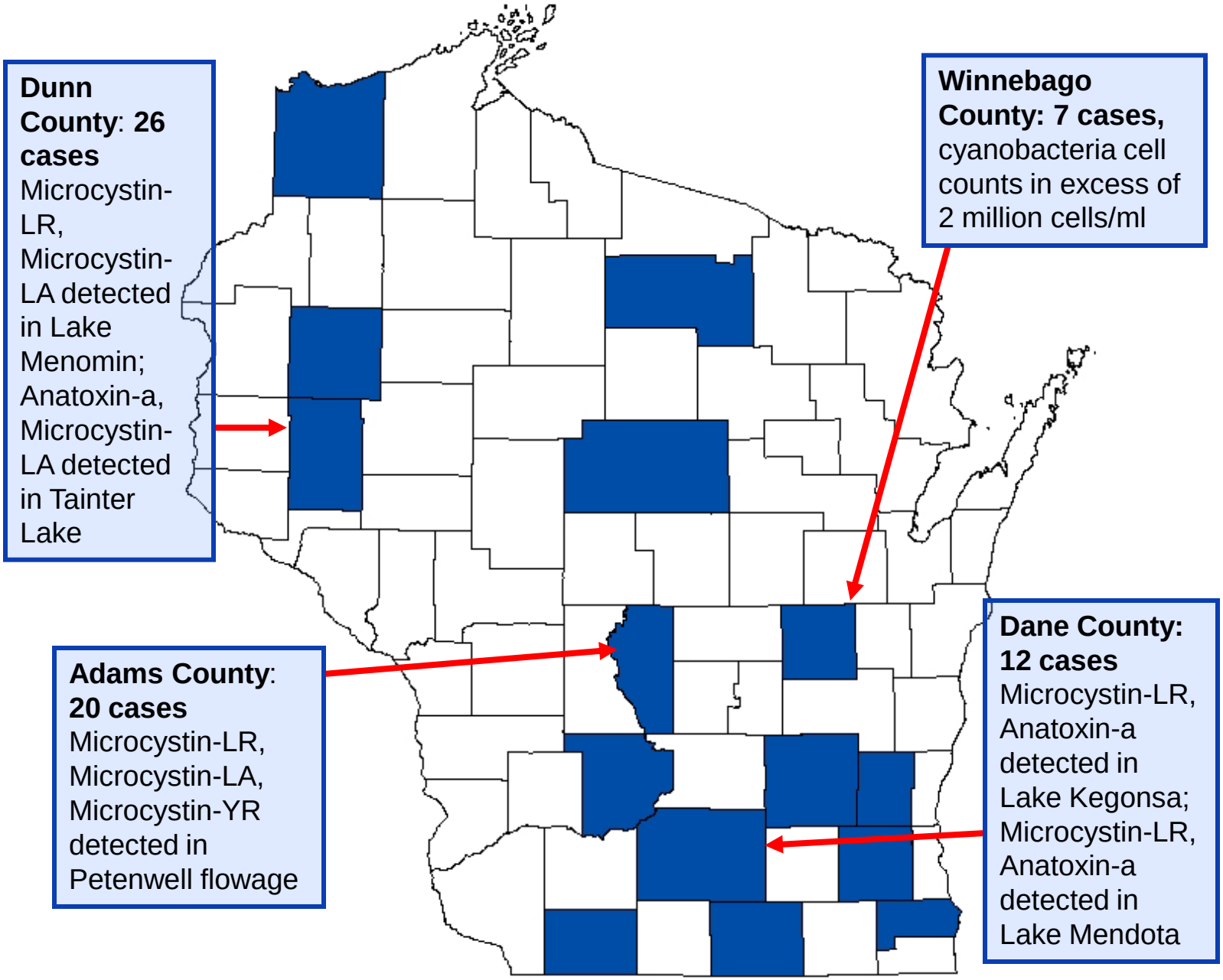
Year	HAB Sampling Events
2009	13
2010	6 (1 non-standard)
2011	11 (2 non-standard)
2012	13 (2 non-standard)

Year	High Risk Cells > 100,000/ml	Moderate Risk Cells 20,000-100,000/ml	Toxins Detected
2009	6	3	9
2010	2	1	2
2011	6	3	7
2012	6	3	6

This map highlights the 15 Wisconsin counties that reported algae-related illnesses to Wisconsin Department of Health Services between 2009 and 2011



Counties Reporting the Highest Number of Algae-related Illnesses 2009-2011



Environmental Public Health Tracking (EPHT)

- Development of HAB indicators
- Piloting by other states
- Provides platform and infrastructure for consistent surveillance on a multi-state basis

Questions?