

## Cambridge Surveillance Report on Active Tuberculosis, 2006-2010

Division of Epidemiology and Data Services  
April 2011

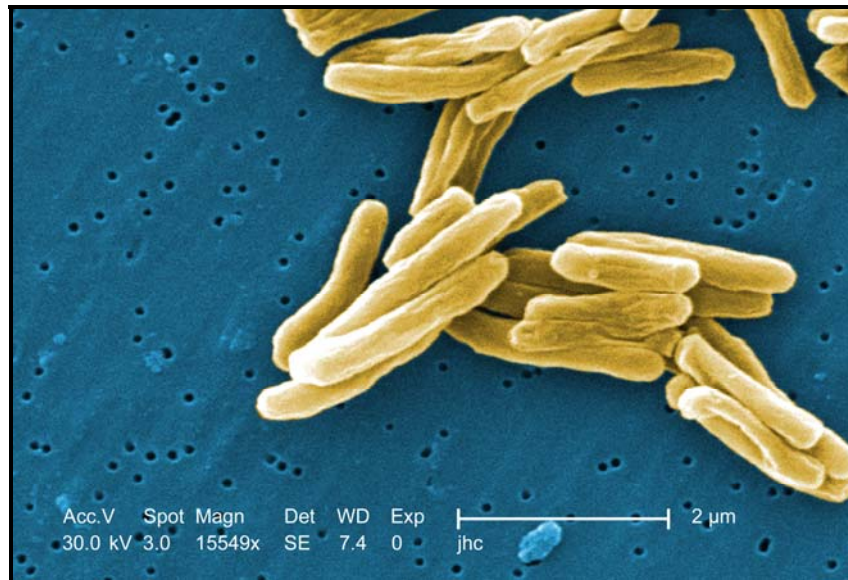


Photo of Gram-positive Mycobacterium tuberculosis bacteria.

Source: Centers for Disease Control and Prevention / Dr. Ray Butler / Janice Haney Carr

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**CAMBRIDGE PUBLIC HEALTH DEPARTMENT**



Cambridge Health Alliance

*The Cambridge Surveillance Report on Active Tuberculosis, 2006-2010* is published by the Division of Epidemiology and Data Services, Cambridge Public Health Department, Cambridge, Massachusetts. Data are obtained from the Massachusetts Department of Public Health, Bureau of Infectious Disease, Response, and Services.

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## Overview

### Tuberculosis – Cambridge and MA

Between 2006 and 2010, 47 cases of active tuberculosis (TB) were reported to and verified by the Massachusetts Department of Public Health (MDPH), Division of Tuberculosis Prevention and Control. This is an annual average of 9 cases per year (range is from 6 to 12 cases per year).

The average annual rate of active TB was 9.3 per 100,000 population in Cambridge and 3.8 per 100,000 population in Massachusetts.

#### Annual Averages for 2006-2010

**Cambridge Case Count:** 9

**Cambridge Rate:** 9.3 per 100,000

**Massachusetts Rate:** 3.8 per 100,000

### Higher Risk Groups

Non-U.S. born: Between 2006 and 2010, 75% of Cambridge residents with TB were born outside the United States and its territories.

Children: Of the 47 TB cases reported between 2006 and 2010, two (4%) were in children <15 years of age.

Homeless: Of the 47 TB cases reported between 2006 and 2010, two (4%) were reported to have been homeless (data not shown in table).

### Characteristics of Cambridge Residents with Active TB (N=47), 2006-2010\*

Age (years)	#	%	MA*
<15	2	4%	2%
15-24	10	21%	15%
25-44	20	43%	37%
45-64	11	23%	29%
65+	4	9%	18%
<b>Sex</b>			
Male	21	45%	58%
Female	26	55%	42%
<b>Race</b>			
Asian, non-Hispanic	16	34%	36%
Black, non-Hispanic	23	49%	27%
Hispanic	2	4%	16%
White, non-Hispanic	6	13%	20%
More than 1 race	0	0%	<1%
<b>US and Non-US Born</b>			
U.S. born	12	26%	18%
Non-U.S. born	35	75%	82%
<b>Disease Site</b>			
Pulmonary	29	62%	69%
Extra Pulmonary	18	38%	31%

\* MA data are from 2006 to 2010 (N=1210). Cambridge data for 2010 are current as of 2/8/2011 and are subject to change.

*Note:* Two Cambridge cases with a disease site of pulmonary in addition to another site are included in the "pulmonary" disease site category. Massachusetts disease site data from 2006 to 2008 reflect primary site of disease. In 2009, Massachusetts changed their reporting to include any disease site, in accordance with a change in CDC reporting standards. Cambridge data for 2006-2010 reflect any disease site.

*Source:* Massachusetts Department of Public Health, Bureau of Infectious Disease, Response, and Services.

## Cambridge Public Health Department TB Program

The Cambridge Health Alliance (CHA) Tuberculosis (TB) clinic, known as the Schipellite Chest Center, is located at the Cambridge Hospital in Cambridge, MA. Funded by the Massachusetts Department of Public Health, the clinic provides free evaluation, treatment, and follow up of active and latent tuberculosis to Massachusetts residents age five and older. Patients make approximately 2,500 visits annually to the clinic.

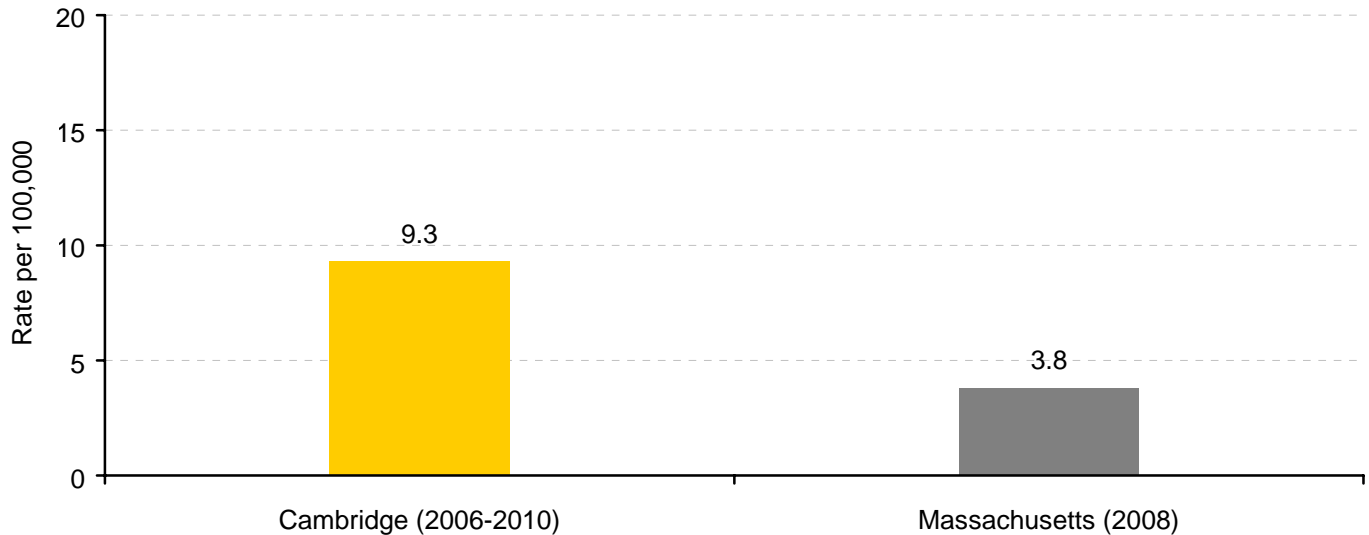
Patients with active tuberculosis are case managed by Cambridge Public Health Department (CPHD) nurses who provide directly observed therapy (DOT) to Cambridge residents with active TB, for the entire course of treatment (6 to 24 months). These patients are seen either at the CHA TB clinic, in their Cambridge residence or receive DOT at their worksite in Cambridge.

This report focuses on active TB cases among Cambridge residents that were confirmed and verified by MDPH (47 patients in 2006-2010).

## Incidence

The annual average rate of active TB among Cambridge residents was 9.3 cases per 100,000 in 2006-2010 (annual rate ranged from 6 to 12). In MA, the annual rate of active TB was 3.8 cases per 100,000 persons.

Figure 1. Rate of Active TB (per 100,000), Cambridge and MA, 2006-2010\*



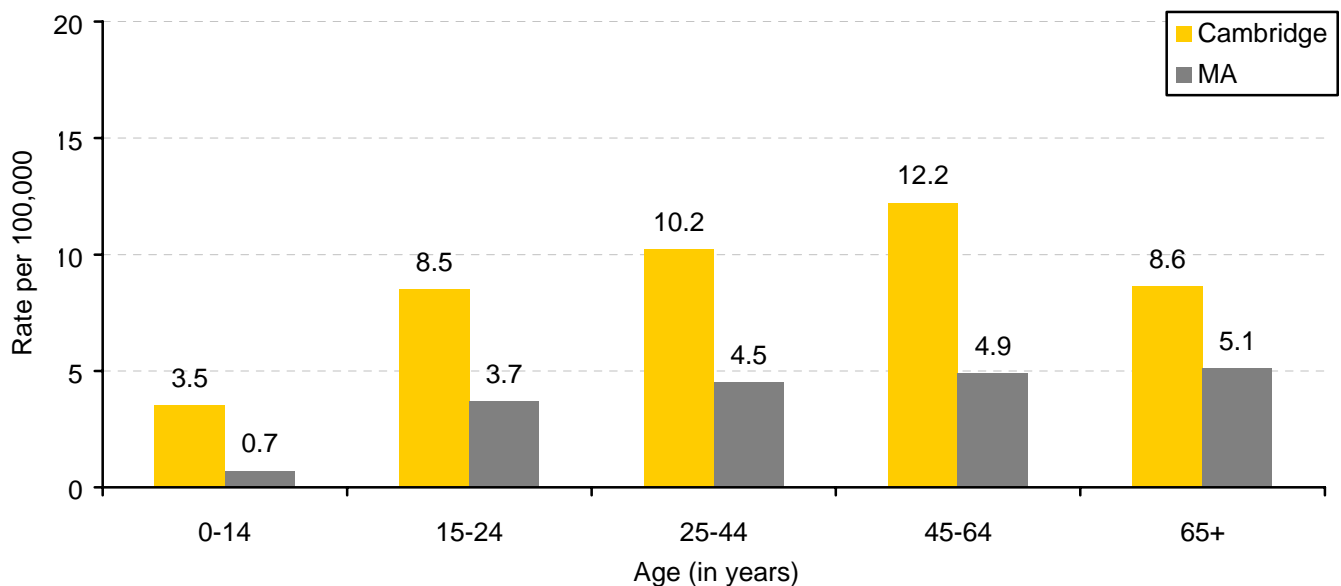
\* Data for 2010 are current as of 2/8/2011 and are subject to change.

Source: Massachusetts Department of Public Health, Bureau of Infectious Disease, Response, and Services

## Age Group

The highest rate of active TB was seen among persons ages 45 to 64 years. The rate of active TB in Cambridge was higher across all age groups when compared to Massachusetts.

Figure 2. Rate of Active TB (per 100,000) by Age Group, Cambridge and MA, 2006-2010\*



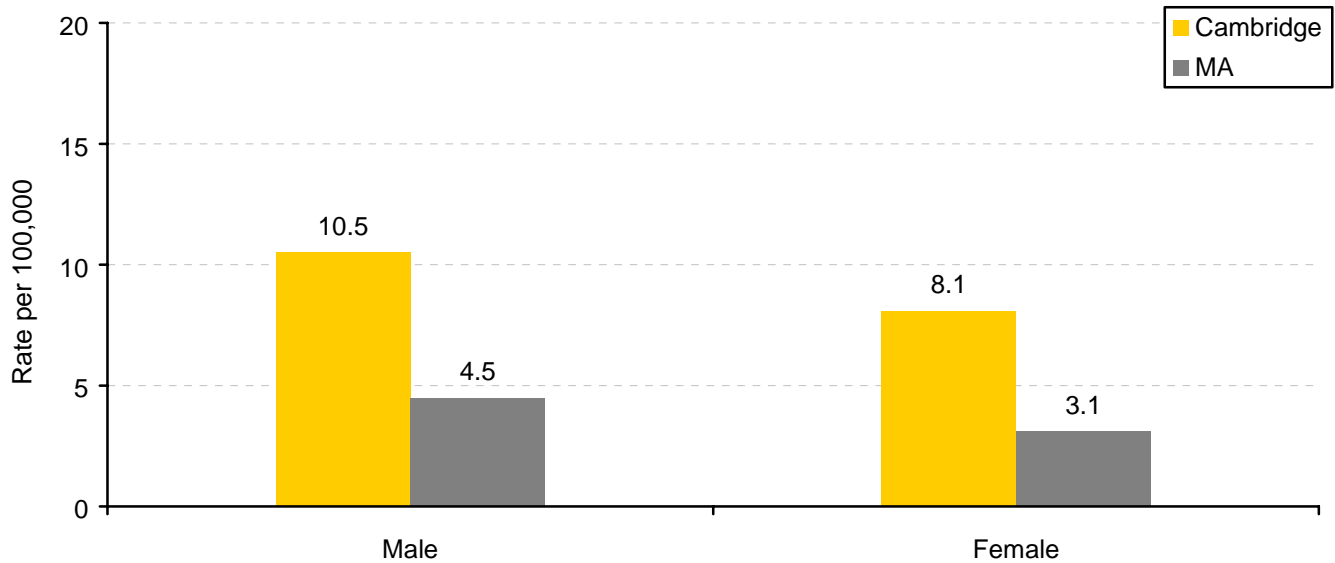
\* Data for 2010 are current as of 2/8/2011 and are subject to change.

Source: Massachusetts Department of Public Health, Bureau of Infectious Disease, Response, and Services

## Gender

In both Cambridge and Massachusetts, the rate of active TB was slightly higher among males compared to females.

Figure 3. Rate of Active TB (per 100,000) by Gender, Cambridge and MA, 2006-2010\*



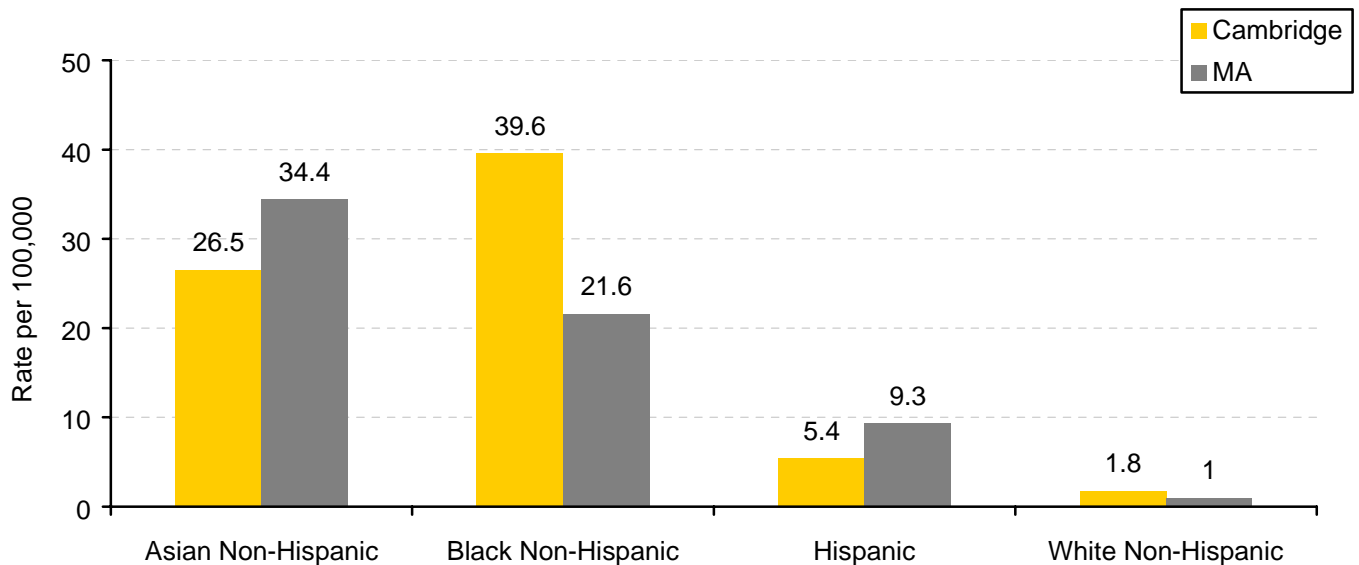
\* Data for 2010 are current as of 2/8/2011 and are subject to change.

Source: Massachusetts Department of Public Health, Bureau of Infectious Disease, Response, and Services

## Race/Ethnicity

In Cambridge, the rate of active TB was highest among Black non-Hispanics. In Massachusetts, the highest rate was among Asian non-Hispanics. This difference may be related to the percent of non-US born persons. Among Black non-Hispanics in Cambridge, 37.5% are non-US born compared to 24.3% in Massachusetts. White non-Hispanics and Hispanics have a substantially lower rate of active TB (compared to Asian non-Hispanics and Black non-Hispanics) in both Cambridge and Massachusetts.

Figure 4. Rate of Active TB (per 100,000) by Race, Cambridge and MA, 2006-2010\*



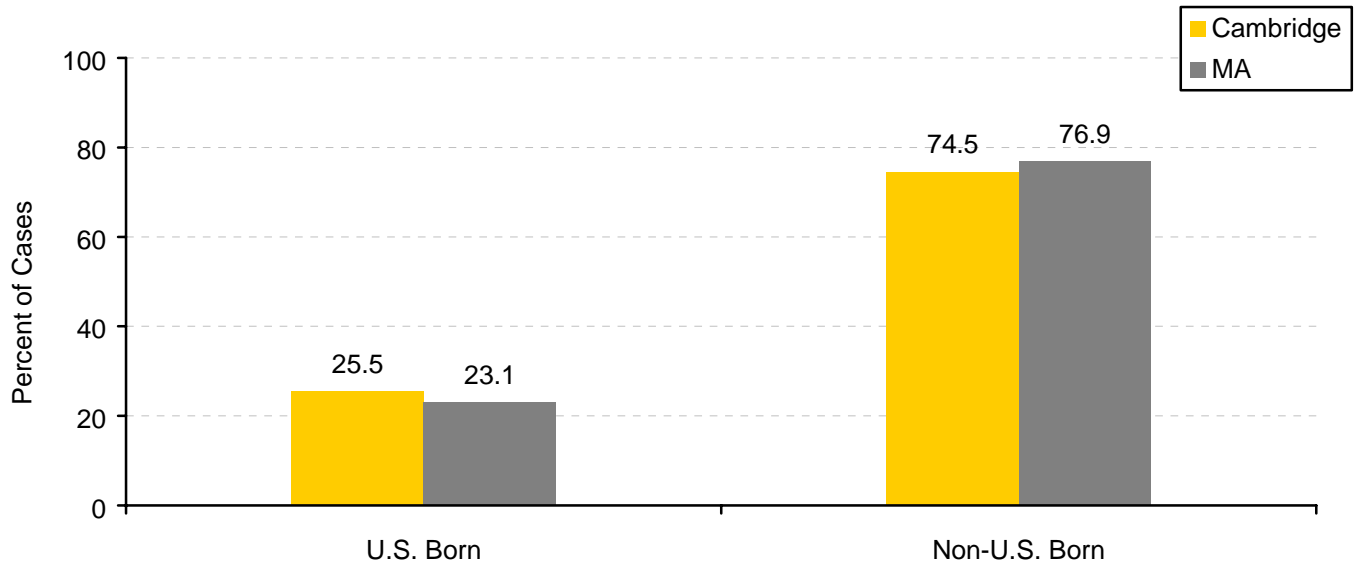
\* Data for 2010 are current as of 2/8/2011 and are subject to change.

Source: Massachusetts Department of Public Health, Bureau of Infectious Disease, Response, and Services

## Foreign Born Status

In both Cambridge and Massachusetts, a majority of patients with active TB were non-U.S. born.

Figure 5. Percent of Active TB by Foreign Born Status, Cambridge and MA, 2006-2010\*



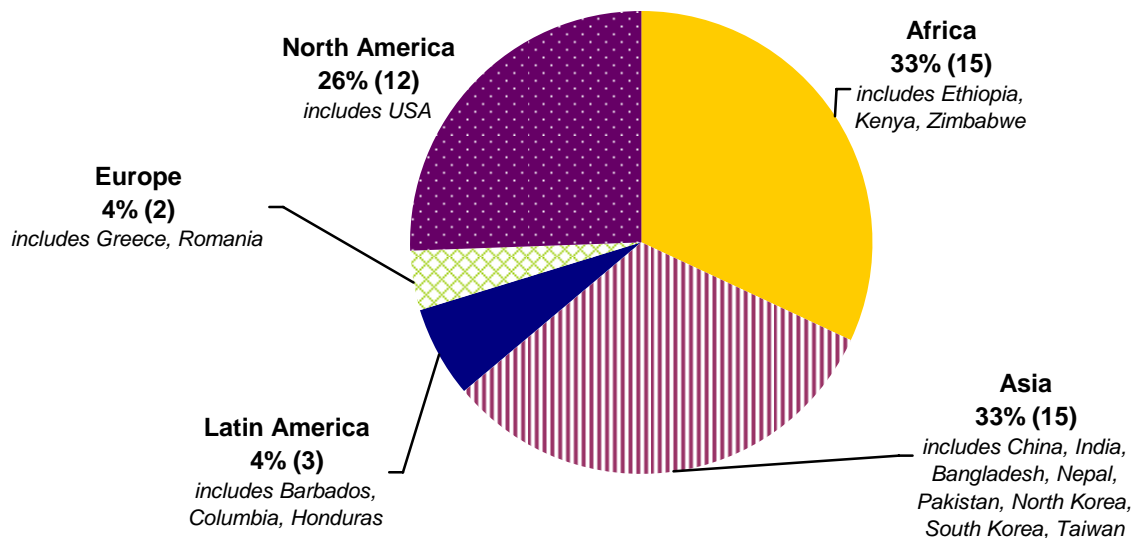
\* Data for 2010 are current as of 2/8/2011 and are subject to change.

Source: Massachusetts Department of Public Health, Bureau of Infectious Disease, Response, and Services

## Region of Birth

In Cambridge, the largest percent of patients with active TB were born in Africa or Asia.

Figure 6. Percent of Active TB by Region of Birth, Cambridge, 2006-2010\*



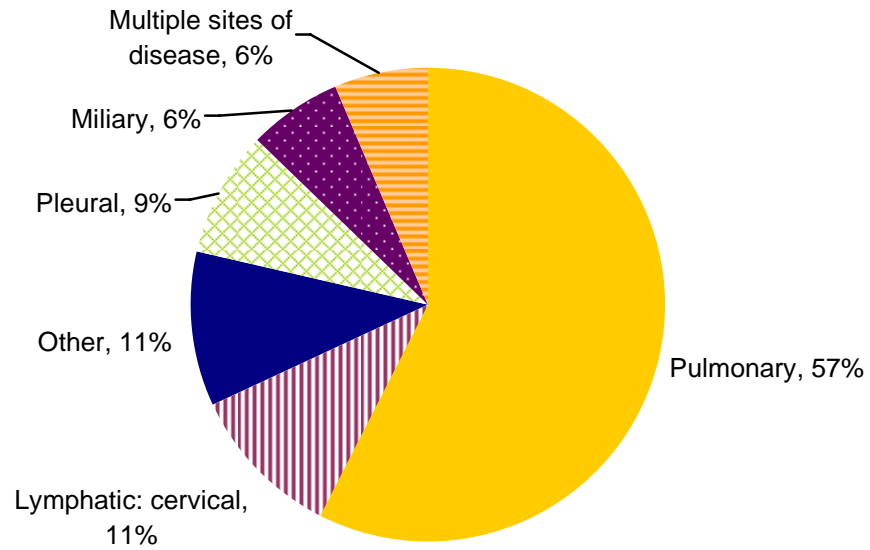
\* Data for 2010 are current as of 2/8/2011 and are subject to change. Massachusetts data are not shown.

Source: Massachusetts Department of Public Health, Bureau of Infectious Disease, Response, and Services

## Disease Site

In Cambridge, the most common disease site for active TB was pulmonary followed by cervical lymph nodes. The category of “other” disease sites includes bone and/or joints, lymphatic axillary, and peritoneal.

Figure 7. Percent of Active TB by Disease Site, Cambridge, 2006-2010\*



\* Data for 2010 are current as of 2/8/2011 and are subject to change. Massachusetts data are not shown.

*Note:* Two Cambridge cases with a disease site of pulmonary in addition to another site are included in the “multiple sites of disease” category.

*Source:* Massachusetts Department of Public Health, Bureau of Infectious Disease, Response, and Services