



# **Massachusetts Hospital Discharge Data: Hospital Race and Ethnicity Data Collection**

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# Race & Ethnicity Data Collection

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- Overview Massachusetts DHCFP Hospital Discharge Data
- Race and Ethnicity standards
- Process for developing new R/E requirements
- DHCFP R/E requirements & implementation
- Quality of DHCFP Race & Ethnicity data

# DHCFP Hospital Discharge Data

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- DHCFP Hospital Discharge Data
  - Inpatient and ED standardized patient level demographic, diagnosis and charge data
- Increased use nationally and statewide to examine effect of disparities in healthcare
  - AHRQ's Healthcare Utilization Project (HCUP) and National Healthcare Disparities Report
  - Other Massachusetts' state agencies: DPH, MassHealth
- Data standards allow for consistent data collection and use by policymakers and researchers

# Race & Ethnicity Standards

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- Federal classification standard for Race & Hispanic Indicator
  - OMB 15: Race and Ethnic Standards for Federal Statistics & Administrative Reporting
    - used for Federal statistical activities and program reporting
    - minimum set of Race categories and definitions
    - Format: Self-identification
- External Race & Ethnicity code sets maintained by CDC
- Healthcare reporting standards evolving
  - Race & Hispanic Indicator supported in UB-04
  - Primary language under review by National Uniform Billing Committee

# 2007 Massachusetts Health Disparities Council Report Recommendations

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- DHCFP moved toward Race & Ethnicity reporting to meet OMB15 standards including self-identification
- Focus on Race & Ethnicity, language under development
- Comprehensive statewide training
- How to use, monitor and help inform others how to address differences

# DHCFP's Race & Ethnicity Changes

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- DHCFP expanded Race and added Ethnicity in 2006
- Massachusetts Hospital Discharge Data aligned Race with national standards OMB15
  - Separation of Hispanic Indicator
  - Updates terminology & categories "Black" to "Black/African American"
  - Allows reporting mixed racial heritage w/o "multiracial category"
  - Reported by self-identification versus inferred
- Addition of Ethnicity to allow for increasing diversity of the population
- Language not collected but under consideration for future

# Collaborative Race & Ethnicity Development Process in Massachusetts

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- Collaborative approach
  - Initial code set development based on Mass Dept Public Health (DPH), Boston Public Health Commission (BPHC), and Boston hospitals pilot test experience for Race and Ethnicity education method and collection tool
- Standardization between state and city agencies
  - Aligned DHCFP, DPH, BPHC Race & Ethnicity data classification
  - Standardized codes map to federal classification
  - Uniform requirements decreased the burden on hospitals for data collection and reporting

# DHCFP Race and Ethnicity Requirements

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- Requirements for DHCFP Hospital Discharge Data
  - Regulation 114.1 CMR 17.00 Submission of Case Mix Data
  - All Massachusetts' acute care hospitals
  - Inpatient, Outpatient Emergency Department, Outpt Observation
- DHCFP Race Requirements prior to FY2007
  - One Race field
  - Seven Race values (White, Black, Asian, Hispanic, American Indian, Unknown, Other)
- New FY2007 DHCFP Requirements
  - Separates Hispanic out from Race field into Hispanic Indicator (y/n) consistent with OMB 15
  - Addition of Ethnicity reporting (33 different Ethnicity values)
  - Each patient can report up to three Races & Ethnicities

# Comparison of Prior Race Requirements to New Race Code Set

Code	Prior Race Requirement
1	White
2	Black
3	Asian
4	Hispanic
5	American Indian
6	Other
9	Unknown

Code	NEW FY2007 Race
R1	American Indian/Alaska Native
R2	Asian
R3	Black/African American
R4	Native Hawaiian or Other Pacific Islander
R5	White
R9	Other Race
Unknow	Unknown/not specified

Code	NEW Hispanic Indicator
Y	Patient is Hispanic/Latino/Spanish.
N	Patient is not Hispanic/Latino/Spanish.

# DHCFP Ethnicity Classification

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- Comprehensive classification for 33 ethnicity categories
  - Hospital IT constraints required limiting number of categories
  - Based on standard CDC Race & Ethnicity hierarchical code list
  - Also allows for future expansion if necessary
- Focus on ethnicities specifically present in Massachusetts
  - Includes specific Massachusetts ethnicities: Brazilian, Cape Verdean, Portuguese, Russian, Eastern European
- Provide Ethnicity mapping tool for hospitals
  - DHCFP Ethnicity Hierarchy lists CDC sub-classifications for hospitals that collect finer detail and need to roll these up to required DHCFP Ethnicities.

# DHCFP Patient Ethnicity Values

Code	Ethnicity Definition
2182-4	Cuban
2184-0	Dominican
2148-5	Mexican, Mexican American, Chicano
2180-8	Puerto Rican
2161-8	Salvadoran
2155-0	Central American (not otherwise specified)
2165-9	South American (not otherwise specified)
2060-2	African
2058-6	African American
AMERCN	American
2028-9	Asian
2029-7	Asian Indian
BRAZIL	Brazilian
2033-9	Cambodian
CVERDN	Cape Verdean
CARIBI	Caribbean Island
2034-7	Chinese

Code	Ethnicity Definition
2169-1	Columbian
2108-9	European
2036-2	Filipino
2157-6	Guatemalan
2071-9	Haitian
2158-4	Honduran
2039-6	Japanese
2040-4	Korean
2041-2	Laotian
2118-8	Middle Eastern
PORTUG	Portuguese
RUSSIA	Russian
EASTEU	Eastern European
2047-9	Vietnamese
OTHER	Other Ethnicity
UNKNOW	Unknown/not specified

# Ethnicities with Subcategories

2060-2 African	includes Botswanan 2061-0Ethiopian 2062-8Liberia 2063-6 Namibian 2064-4 Nigerian 2065-1 Zairean 2066-9 African plus others
2028-9 Asian	includes Bangladeshi 2030-5 Bhutanese 2031-3 Burmese 2032-1Hmong 2037-0 Indonesian 2038-8 Madagascar 2052-9 Malaysian 2042-0 Maldivian 2049-5Nepalese 2050-3Pakistani 2044-6 Singaporean 2051-1 Sri Lankan 2045-3 Taiwanese 2035-4 Thai 2046-1
2155-0 Central American	includes Costa Rican 2156-8Nicaraguan 2159-2Panamanian 2160-0Central American Indian 2162-6 Belize
2148-5 Mexican, Mex. American, Chicano	includes Mexican American 2149-3 Mexicano 2150-1 Chicano 2151 – 9 La Raza 2152-7 Mexican American Indian 2153-5)
Caribbean Island	includes Barbadian 2068-5 Dominica Islander 2070-1 Jamaican 2072-7 Trinidadian 2074-3Tobagoan 2073-5 West Indian 2075-0
2108-9 European	includes English 2110-5French 2111-3German 2112-1Irish 2113-9 Italian 2114-7Scottish 2116-2European also includes: Greek and Spanish
2118-8 Middle Eastern or North African	includes Assyian 2119-6 Egyptian 2120-4 Iranian 2121-2 Iraqi 2122-0 Lebanese 2123-8 Palestinian 2124-6 Syrian 2125-3 Afghanistani 2126-1 Israeli 2127-9 Middle Eastern also includes: Algerian, Jordan, Kuwait, Oman, Qatar, Saudi Arabia, Sudanese, United Arab Emirates, and Yemen
Portuguese	includes Azorean Canarian 2145-1
Eastern European	Armenian 2109-7 Polish 2115-4. Also includes: Albanian, Bosnia, Croatia, Czech Republic, Hungary, Lithuania, Macedonia, Romania, Ukraine plus others.

For complete DHCFP Ethnicity Hierarchy for Reporting Ethnicity see:

[http://www.mass.gov/Eeohhs2/docs/dhcfp/g/regs/114\\_1\\_17\\_hierarchy\\_ethnicity.pdf](http://www.mass.gov/Eeohhs2/docs/dhcfp/g/regs/114_1_17_hierarchy_ethnicity.pdf)



# DHCFP FY07 Race & Ethnicity Implementation

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- DHCFP FY07 Race and Ethnicity Implementation
  - Phased-in implementation beginning October 1, 2006
    - race and ethnicity were two of many major FY07 changes
  - Data required in new fields April 1, 2007
  - Required reporting for Race 1, Hispanic Indicator & Ethnicity 1
- Fall 2006 four statewide regional trainings
  - Sponsored by MHA with Cambridge Health Alliance (CHA), Boston Disparities Center (MGH), DHCFP, and DPH
  - To assist hospitals in complying with the Division's new race and ethnicity requirements
    - Provided guidelines and dialogue for how to gather information for the new self-reported process
    - Provided success story by CHA's implementation



# FY07 Inpatient Statewide Q3 &4: Race, Hispanic Indicator, Ethnicity

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- **Race 1:**

- White 80%
- Black/African American 7%
- Unknown 6%
- Other 6%
- Asian 2%

- **Race 2:**

- Blank 85%
- White 8%
- Black/African American 2%
- Unknown/not specified 4%
- Other Race 1%
- Asian 0.20%
- American Indian/Alaska Native 0.05%

- **Hispanic Indicator:**

- 7% Hispanic Yes

**Note: Results similar for ED data.**

- **Ethnicity 1:**

- American 45%
- Unknown/Blank 21%
- European 13%
- Other 6%
- African American 3%
- Puerto Rican 3%

- **Ethnicity 2:**

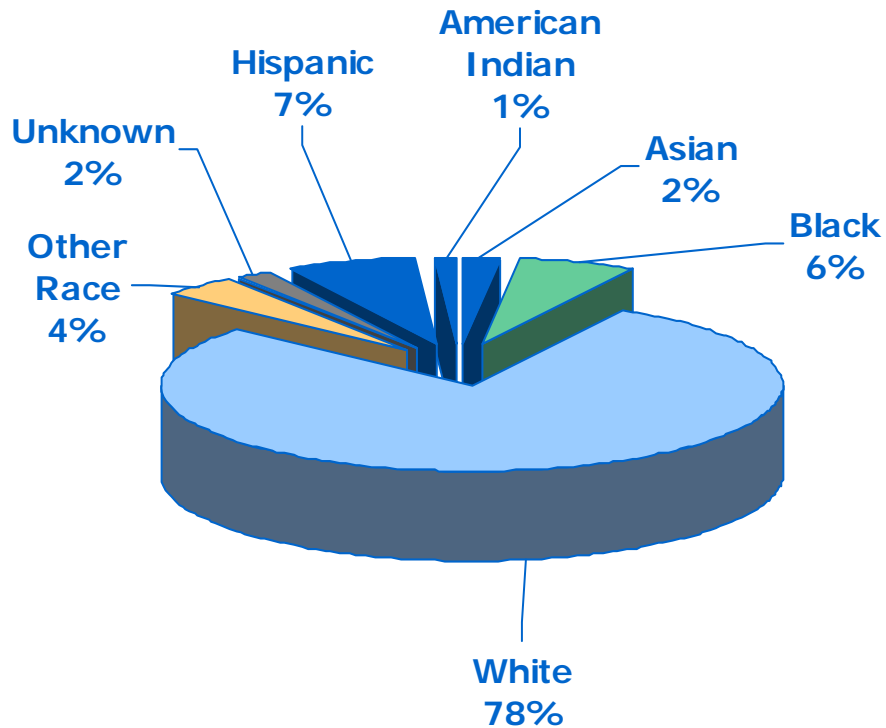
- Unknown/Blank 93%
- European 4%
- American 1%

- **Results for Free Text Fields:**

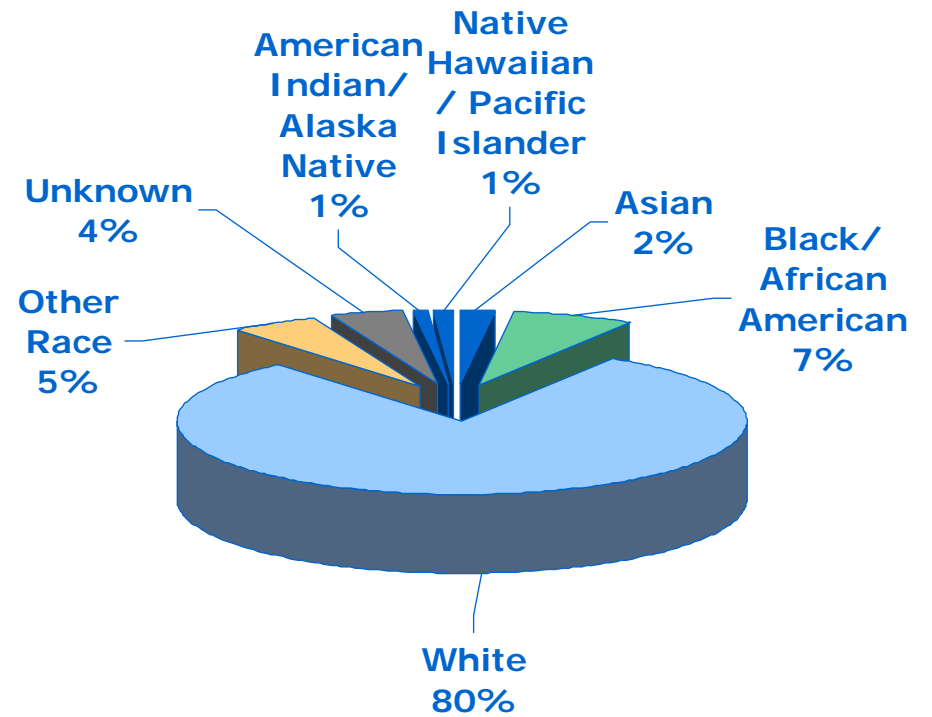
- “Unknown” Race (5%) or “Unknown” or “American” Ethnicity (48%)
  - additional fields are predominantly blank
- Race 1 is Other (6%)
  - free text is 34% Hispanic (97% Yes Hisp Indicator)
- Ethnicity 1 is Other (6% discharges)
  - free text is 30% declined

# Comparison FY06 Race to FY08 Race 1

## FY2006 Race



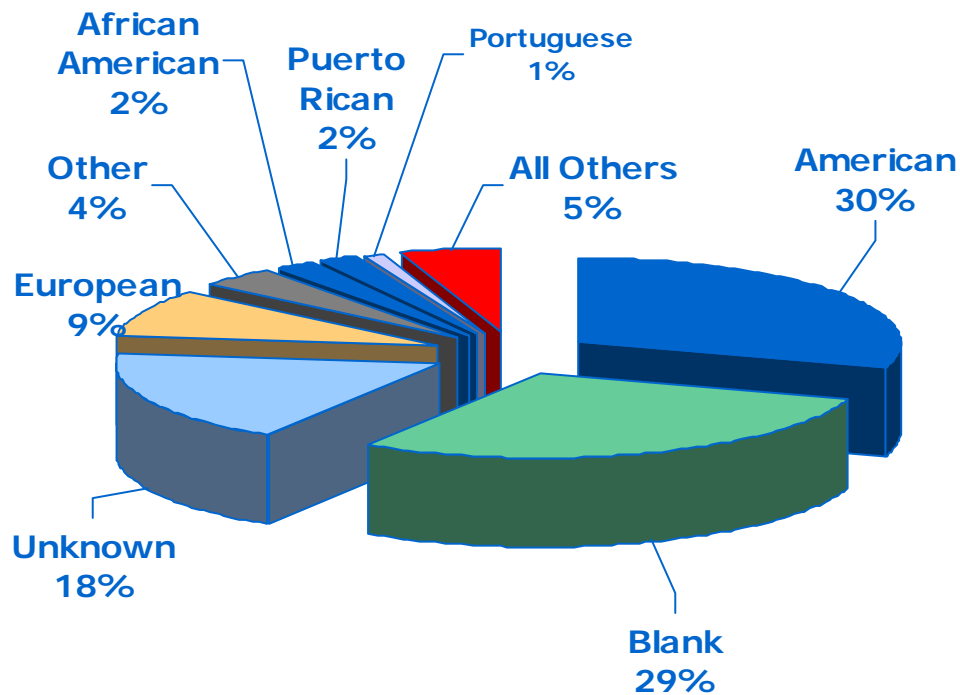
## Preliminary FY2008 Race 1



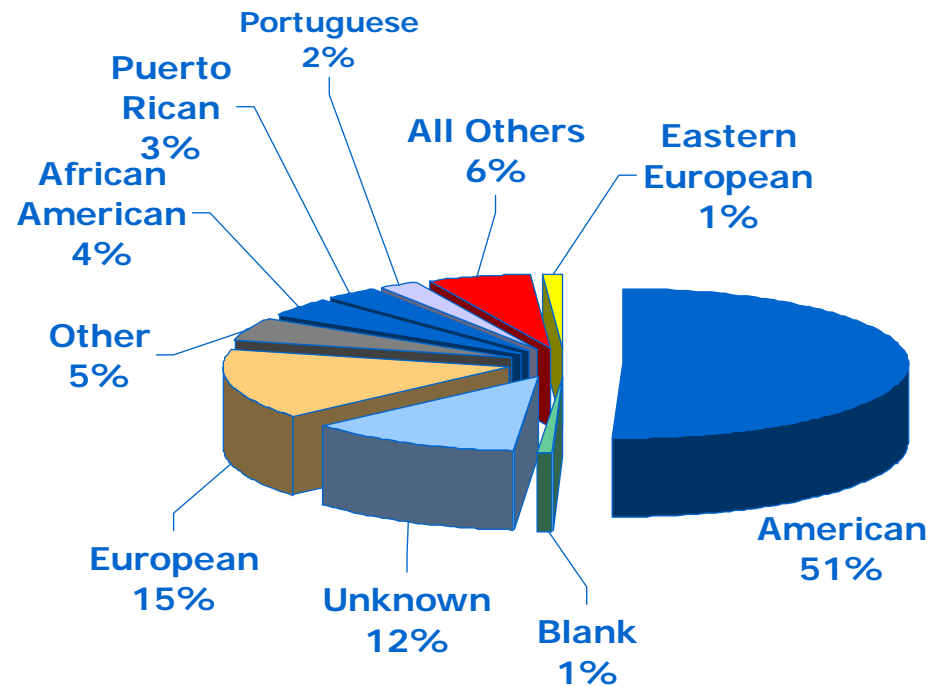
Note: Percents rounded up for: FY06 American Indian 0.29%; FY08 American Indian/Alaska Native 0.09% and Native Hawaiian/Pacific Islander 0.035%. Not shown FY08 Hispanic Indicator- Yes 7%.

# Ethnicity 1 Comparison FY07 to FY08

## FY2007 Ethnicity

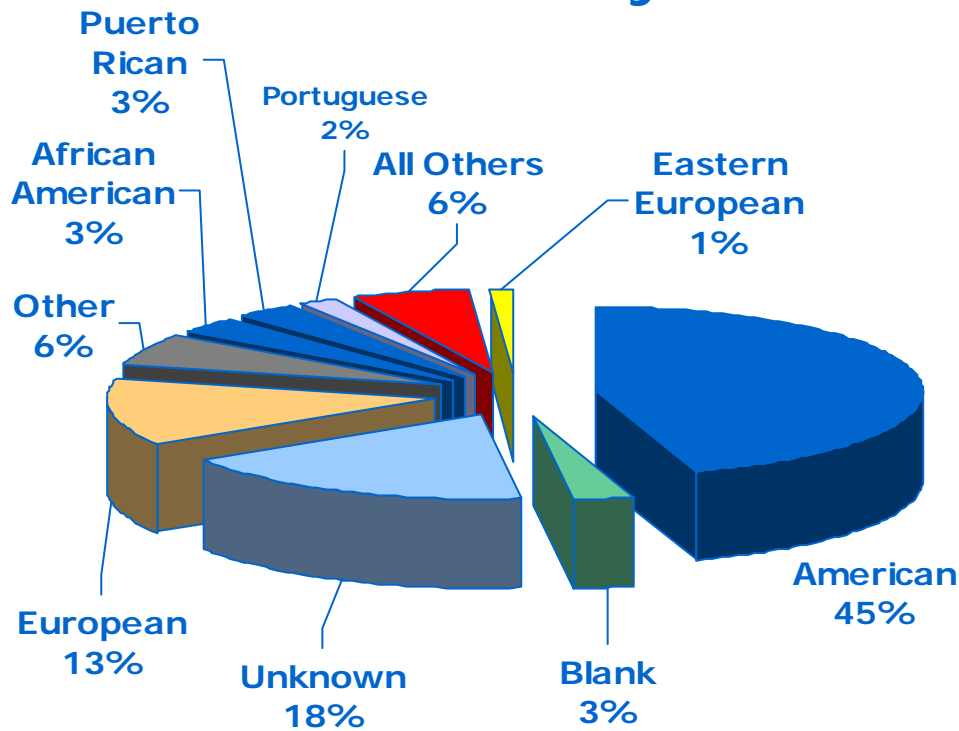


## Preliminary FY2008 Ethnicity

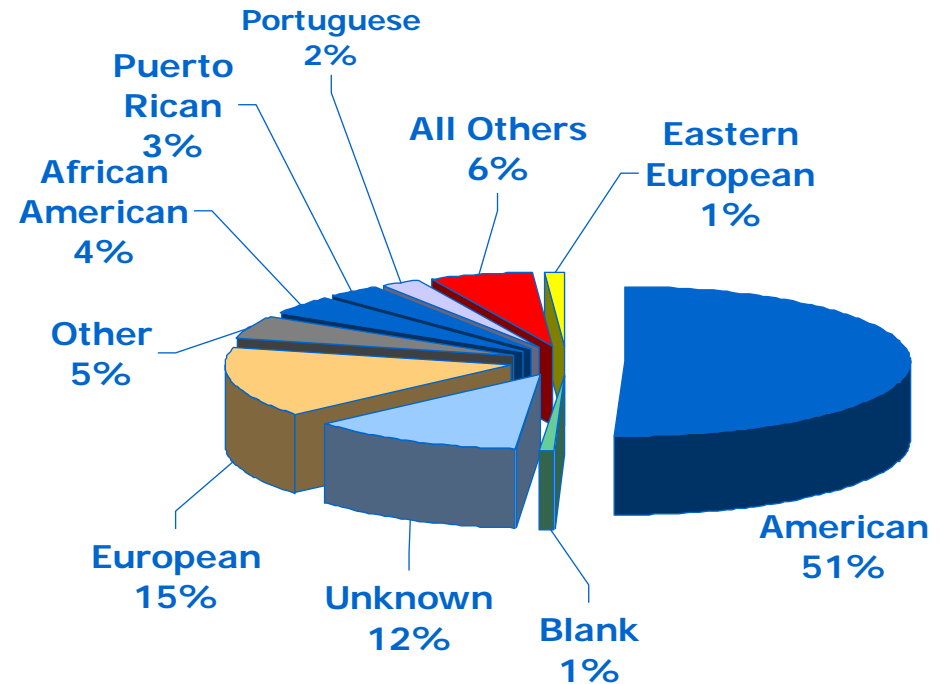


# Ethnicity 1 Comparison FY07-Q3/Q4 to FY08

## FY2007-Q3/Q4 Ethnicity



## Preliminary FY2008 Ethnicity



# FY2008 Ethnicity Results

American	50.49%
European	14.89%
Unknown	11.67%
Other	5.28%
African American	3.55%
Puerto Rican	2.68%
Portuguese	1.72%
Eastern European	1.36%
Dominican	0.85%
Asian	0.64%
Brazilian	0.58%
Haitian	0.52%

Cape Verdean	0.48%
Russian	0.46%
Chinese	0.45%
African	0.43%
Middle Eastern	0.35%
Asian Indian	0.30%
Salvadoran	0.28%
Caribbean Island	0.25%
Vietnamese	0.24%
Guatemalan	0.24%
Cambodian	0.20%
South American	0.16%

Based on 840,102 inpatient hospital discharges for 33 DHCFP Ethnicity categories. Other Ethnicity categories not shown include: Mexican 0.14%; Columbian 0.13%; Honduran 0.11%; Korean 0.09%; Central American 0.07%; Cuban 0.07%; Japanese 0.05%; Filipino 0.04%; Laotian 0.03%.



# Reporting Improvement

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- Data improves from early FY2007 to FY2008
  - No missing Race data
  - Fewer hospitals reporting high Unknown Race and Other Race
  - FY07 only one hospital had technical issue reporting wrong value
  - FY07 Q3 and Q4 are more accurate for FY07 year (similar to the FY08 results)
- Ethnicity reporting still improving
  - Hospitals reporting high Missing, Unknown and Other Ethnicity improve over the FY07 year
  - FY08 American and European increase as blank and Unknown percent declines

# Conclusion

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- Implementation of DHCFP R/E was complex
  - R/E was one of many new DHCFP data requirements for hospitals' IT vendors
  - R/E required new collection process, training, and tools for hospitals staff and patients, not just IT changes
- Hospital reporting has improved since implementation
  - Many hospitals had technical reporting problems that slowly resolved during FY07
- Issues may still exist with Hispanic data collection
  - reporting "Other Race" with Hispanic free text

# Lessons Learned

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- Meaningfulness of the requirements
  - Requirements incorporate local need but also consider national needs
  - Easier to implement when hospitals and patients understand the purpose and that the purpose is in the interest of the patient
- Base requirements on established national standards
- When no standards exist, keep the design simple but for future updates
  - comprehensive values to identify major groups yet manageable number
  - Start with lowest common denominator to allow for flexibility for future updates (minimizes resources use to upgrade in the future)
- Allow ample time to implement changes
  - 6-12 months: IT programming, hospital training, testing data submissions
  - Feedback to hospitals for corrections
- Allow free text for non-descriptive fields during patient interview versus patient prompts (convert to defined value for data submission)
  - American, patient denied

# Use of Hospital Discharge Data Race & Ethnicity

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- Hospital Discharge Data
  - comprehensive data available for research
  - allows for easier and faster access (compared to other health data)
- Evaluate where potential health care disparities exist specific to Massachusetts, with focus on diseases of interest
  - using ICD-9-CM diagnosis and procedure codes
  - by race and ethnicity, gender
  - by hospital, physician (de-identified Unique Physician ID)
- Use for prevention of disparities and improvement in care
  - supplemental use for MassHealth P4P initiatives toward development of disparities index score