

IVR Form Mapper Azure Function Documentation

Overview

This Azure Function maps form data from your application to manufacturer-specific Insurance Verification Request (IVR) forms. Each manufacturer has different field requirements and naming conventions, which this function handles automatically.

API Endpoint

POST /api/MapFormToIVR

Request Format

Headers

Content-Type: application/json

Request Body


```
{
  .. "manufacturerId": "medlife-solutions",
  .. "isOrderForm": false,
  .. "formData": {
    .... // Your form field data
    .... "patient_first_name": "John",
    .... "patient_last_name": "Doe",
    .... "patient_dob": "1980-01-15",
    .... "patient_gender": "male",
    .... "patient_phone": "5551234567",
    .... "patient_address_line1": "123 Main St",
    .... "patient_city": "Houston",
    .... "patient_state": "TX",
    .... "patient_zip": "77001",

    ....
    .... // Provider information
    .... "provider_name": "Dr. Jane Smith",
    .... "provider_npi": "1234567890",
    .... "provider_specialty": "Wound Care",

    ....
    .... // Facility information
    .... "facility_name": "Houston Medical Center",
    .... "facility_npi": "9876543210",
    .... "facility_address": "456 Medical Plaza",
    .... "facility_phone": "5559876543",

    ....
    .... // Insurance information
    .... "primary_insurance_name": "BlueCross BlueShield",
    .... "primary_member_id": "ABC123456789",

    ....
    .... // Clinical information
    .... "wound_size_length": "5",
    .... "wound_size_width": "3",
    .... "wound_location": "Left foot",
    .... "wound_types": ["diabetic_foot_ulcer"],
    .... "icd10_codes": ["L97.511", "E11.621"],
    .... "expected_service_date": "2025-07-10",

    ....
    .... // Place of service
    .... "place_of_service": "11",

    ....
    .... // Product selection
    .... "selected_products": ["Q4161"]
  }
}
```

Response Format

Success Response (200 OK)

json

```
{
  "manufacturerId": "medlife-solutions",
  "manufacturerName": "MEDLIFE SOLUTIONS",
  "docusealTemplatelId": "1233913",
  "mappedFields": {
    "Name": "John Doe",
    "Email": "provider@example.com",
    "Phone": "(555) 123-4567",
    "Distributor/Company": "MSC Wound Care",
    "Physician Name": "Dr. Jane Smith",
    "Physician NPI": "1234567890",
    "Practice Name": "Houston Medical Center",
    "Patient Name": "John Doe",
    "Patient DOB": "01/15/1980",
    "Primary Insurance": "BlueCross BlueShield",
    "Member ID": "ABC123456789",
    "Office: POS-11": true,
    "L": "5",
    "W": "3",
    "Wound Size Total": 15,
    "Wound location": "Left foot",
    "ICD-10 #1": "L97.511",
    "ICD-10 #2": "E11.621",
    "CPT #1": "15271",
    "Procedure Date": "07/10/2025"
  },
  "isOrderForm": false,
  "orderFormTemplatelId": null
}
```

Validation Error Response (400 Bad Request)

json

```
{  
  "error": "Validation failed",  
  "missingFields": ["patient_name", "provider_npi"],  
  "invalidFields": ["provider_npi (invalid npi)"]  
}
```

Supported Manufacturers

Complete Implementations

1. **medlife-solutions** - MEDLIFE SOLUTIONS
 - IVR Template ID: 1233913
 - Order Form Template ID: 1234279
2. **biowound-solutions** - BIOWOUND SOLUTIONS
 - IVR Template ID: 1254774
 - Order Form Template ID: 1299495
3. **advanced-solution** - ADVANCED SOLUTION
 - IVR Template ID: 1199885
 - Has order form support
4. **centurion-therapeutics** - CENTURION THERAPEUTICS
 - IVR Template ID: 1233918
5. **acz-associates** - ACZ & Associates
 - Template ID pending

Partial Implementations

- advanced-health
- biowerx
- extremity-care-llc
- skye-biologics
- total-ancillary

Field Mapping Features

1. Direct Field Mapping

Simple one-to-one field mapping:

json

"patient_phone": "5551234567" → "Patient Phone": "(555) 123-4567"

2. Computed Fields

Fields calculated from multiple source fields:

json

"patient_first_name": "John",
"patient_last_name": "Doe"
→ "Patient Name": "John Doe"

3. Conditional Logic

Fields based on conditions:

json

"place_of_service": "11" → "Office: POS-11": true

4. Array Access

Extracting values from arrays:

json

"icd10_codes": ["L97.511", "E11.621"]
→ "ICD-10 #1": "L97.511"
→ "ICD-10 #2": "E11.621"

5. Fallback Sources

Using alternative fields if primary is missing:

json

Source: "contact_name || office_contact_name || sales_rep_name"

Data Transformations

Date Formatting

- Input: "2025-07-04" or "07/04/2025"
- Transform: date:m/d/Y
- Output: "7/4/2025"

Phone Formatting

- Input: "5551234567" or "555-123-4567"
- Transform: phone:US
- Output: "(555) 123-4567"

Boolean Conversions

- Input: true, "yes", "1"
- Transform: boolean:yes_no
- Output: "Yes" or "No"

Number Formatting

- Input: 5.678
- Transform: number:2
- Output: 5.68

Currency Formatting

- Input: 150.5
- Transform: currency
- Output: "\$150.50"

Validation Rules

NPI Validation

- Must be exactly 10 digits
- Example: "1234567890"

ICD-10 Validation

- Format: Letter + 2 digits + optional decimal and up to 4 more digits
- Example: "L97.511"

Email Validation

- Standard email format
- Example: `"doctor@clinic.com"`

Phone Validation

- 10 or 11 digits (11 if starts with 1)
- Example: `"5551234567"` or `"15551234567"`

Implementation Tips

1. Handle Missing Fields Gracefully

The function uses fallback sources, so provide alternative field names when possible:

```
json
{
  "provider_name": "Dr. Smith",
  "physician_name": "Dr. Smith" // Alternative field name
}
```

2. Arrays for Multiple Values

For fields that can have multiple values:

```
json
{
  "icd10_codes": ["L97.511", "E11.621", "Z86.31"],
  "wound_types": ["diabetic_foot_ulcer", "venous_leg_ulcer"]
}
```

3. Place of Service Codes

Common POS codes:

- 11: Office
- 12: Home
- 13: Assisted Living Facility
- 22: Hospital Outpatient
- 31: Skilled Nursing Facility
- 32: Nursing Facility

4. Product Codes (Q-Codes)

Map products to their Q-codes:

- Q4161: Bio-ConneKt
- Q4205: Membrane Wrap
- Q4290: Membrane Wrap Hydro
- Q4238: Derm-Maxx
- Q4239: Amnio-Maxx

Error Handling

Common Errors

1. Missing Manufacturer ID

json

```
{"error": "Invalid request. ManufacturerId is required."}
```

2. Unknown Manufacturer

json

```
{"error": "Unknown manufacturer: invalid-id"}
```

3. Validation Failures

json

```
{  
  "error": "Validation failed",  
  "missingFields": ["patient_name", "provider_npi"],  
  "invalidFields": ["provider_npi (invalid npi)"]  
}
```

Testing Example

cURL Request

bash

```
curl -X POST https://your-function-app.azurewebsites.net/api/MapFormToIVR \
-H "Content-Type: application/json" \
-d '{
  "manufacturerId": "medlife-solutions",
  "isOrderForm": false,
  "formData": {
    "patient_first_name": "John",
    "patient_last_name": "Doe",
    "patient_dob": "1980-01-15",
    "provider_name": "Dr. Jane Smith",
    "provider_npi": "1234567890",
    "facility_name": "Houston Medical Center",
    "primary_insurance_name": "BlueCross BlueShield",
    "primary_member_id": "ABC123456789",
    "wound_size_length": "5",
    "wound_size_width": "3",
    "wound_location": "Left foot",
    "icd10_codes": ["L97.511"],
    "expected_service_date": "2025-07-10",
    "place_of_service": "11"
  }
}'
```

Deployment

1. Create an Azure Function App in the Azure Portal
2. Deploy the function code
3. Configure Application Settings if needed
4. Test with the provided examples
5. Monitor using Application Insights

Extending for New Manufacturers

To add a new manufacturer:

1. Add configuration in `ManufacturerConfigService`
2. Define field mappings in `DocusealFieldNames`
3. Configure field specifications in `Fields`
4. Add any custom transformation logic

5. Test with sample data

Support

For issues or questions:

- Check validation error messages for missing/invalid fields
- Verify manufacturer ID is correct
- Ensure all required fields are provided
- Review field transformation rules
- Check logs in Application Insights